FOR THE AMSTRAD PCW 8256-8512

8000 PLUS

ISSUE 12 • SEPTEMBER 1987 • £1.50

PCW 9512 UNVEILED!

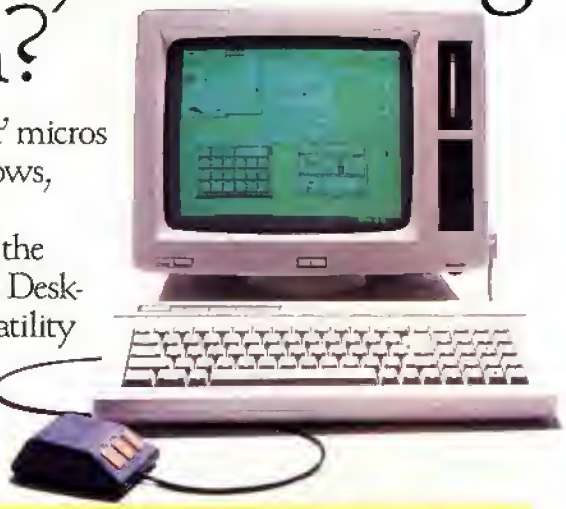
Official details of Amstrad's new machine

File facts

Find your ideal database with our comprehensive survey

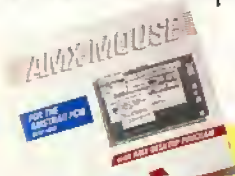
Is the PCW your perfect Bridge partner? • Make money from writing • Pocket Protext reviewed

What's so special about the Mac, the Atari St, The Amiga, Windows and Gem?



It's no surprise that nearly all new 16 bit 'state of the art' micros now come with a Mouse and Wimp environment (Windows, Icons, Menus and Pointers) as standard.

With the AMSTRAD PCW you already own one of the classic micros and by simply adding the AMX Mouse and Desk-top you can achieve the same ease of use, freedom and versatility of much more sophisticated computers.



The AMX Mouse and compatible software – it's what you and your AMSTRAD micro have been missing.

AMX MOUSE PACKAGE 3" DISC £79.95

There's not much joy in a joystick and keyboards can be all fingers and thumbs. Acclaimed by the press as 'the best input device', already over 50,000 micro users have adopted an AMX Mouse. No more complicated CP/M commands to remember, with the AMX Mouse you just point and click, even the experts find this system more efficient. Available for the Amstrad PCW 8256 & 8512.

GRAPHIC FRONT END

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A central place to store all your important names, addresses and telephone numbers.

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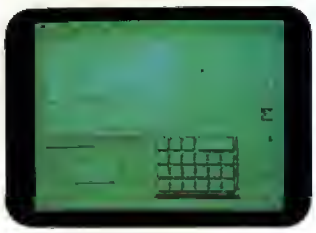

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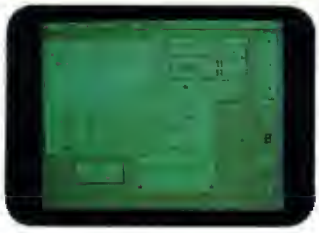
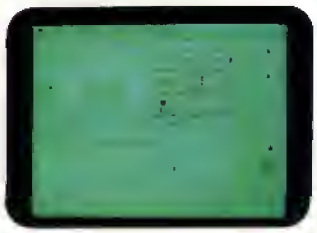
A versatile appointments diary allowing you up to seven lines to be entered for any day. Printing facilities allow yearly and monthly summaries to be produced indicating days for which an entry has been indicated.



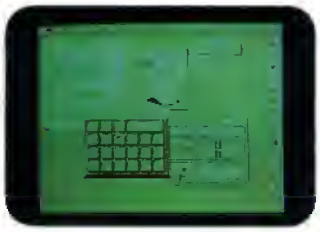
MEMO PAD

This allows anything from a quick memo to a complete multi-page report to be produced from the Desktop. Many word processing features are included such as centering, justification, cut, copy and paste etc.



DESK ACCESSORIES

The AMX Mouse package also includes a number of extra functions which are available for use at all times from the desktop. These include a jotter, alarm clock, calculator, puzzle and control panel – the type of tools found on a real desk top!



STOP PRESS... STOP PRESS...

There will be a growing list of further mouse compatible software for the Amstrad PCW from AMS and other leading software houses in the coming months including Graphic and Desktop publishing programs.

This superb product is available now from all good computer dealers or direct by cheque, Access or Visa. All prices include VAT and post and packaging.

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8000 PLUS

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kNockout Reviews
InValuable Tips
SiZzling Offers

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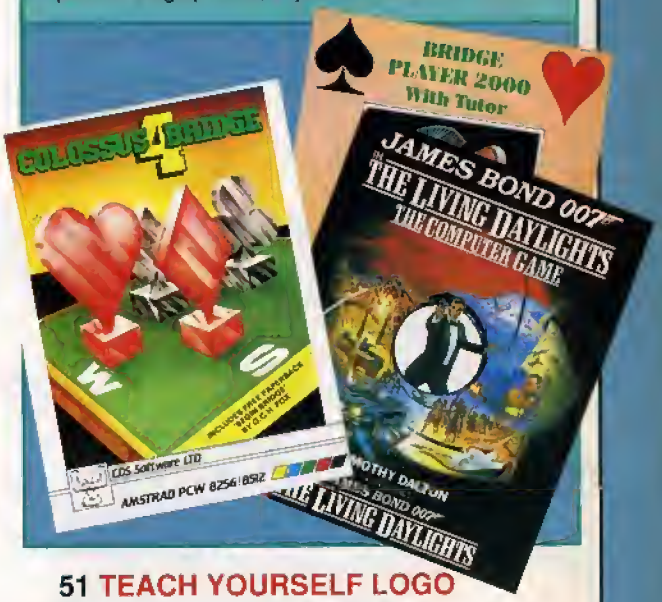

PUBLISHED BY
FUTURE PUBLISHING LTD

EDITORIAL • ADVERTISING
PUBLISHING

4 QUEEN STREET
BATH • BA1 1EJ
TEL • 0225 446034
FAX • 0225 446019

Telecom Gold • 84:TXT152

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STUDIO SEVENTY
BOW STREET • LANGPORT
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TEL • 0458 250807

COLOUR ORIGINATION
WESSEX REPRODUCTIONS
352A WELLS ROAD
BRISTOL • BS4 2QL

PRINTING
REDWOOD WEB OFFSET
YEOMANS WAY
TROWBRIDGE • WILTS

DISTRIBUTION
SEYMOUR PRESS
334 BRIXTON ROAD
LONDON • SW9 7AG

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Desktop shuffle

This very page taking shape on our new Macintoshes

Those of you with an eye for printing techniques may notice a few changes in this and future issues of 8000 Plus following some exciting goings on in our production process.

Desktop publishing is the buzzphrase of the moment, but good though many of the PCW programs may be, dot matrix printer output isn't quite what is wanted for handling a national magazine. We've recently bought half a dozen Apple Macintoshes and a Macintosh desktop publishing program called Quark XPress. These together can produce complete pages on-screen and send them through via the impressively titled RIP (Raster Image Processor) unit to our Linotron photo-typesetter.

All our articles and reviews are still written directly on to PCWs then transferred to the Macintosh and given to the art team who print out complete A4-size typeset pages. Simple diagrams can be directly typeset too – the only manual paste-up work left to do is to add any photos, although we hope shortly to get a digitiser to scan pictures directly on to the Macintosh.

The tangible results of all this are that we should have fewer cock-ups (saying that is tempting fate!), a more flexible and exciting look to the pages and a faster production cycle.

ONE GUN SALUTE

It doesn't feel quite right to be rambling nostalgically in August about the good old days of the year gone by. That sort of thing makes it feel like Christmas-time. Nevertheless, as we tap the final keystrokes of issue 12, 8000 Plus is indeed one year old.

First and foremost we'd like thank all you readers for being lively correspondents and ingenious sources of TipOffs and Listings. Every month's postbag is full of enthusiastic ideas and intelligent comments, which has all helped to make 8000 Plus the best selling PCW magazine of the moment.

We've tried to make 8000 Plus a bit different from run of the mill computer magazines, because most of our readers aren't run of the mill computer owners. If you are a machine code programming freak, you won't find much in our pages to read and that's how it will stay.

One problem that inevitably crops up as a magazine runs to more than a few issues is that of repeating material. Many people who have bought their PCW since our issue 1 will have missed many informative articles and tips. We will try to maintain a mix over the coming year of articles to help new readers get to grips with the things that you old-timers now find second nature and of course plenty of new material for our established readers.

It is a fitting start to year two that Amstrad should launch their new model PCW, the 9512.

Happy new year everyone!

Ben Taylor

Competition results

Having driven the Bath postmen to distraction, the Design Design/8000 Plus 'Distractions' competition is now all done and judged. Our six mystery photos didn't prove much of a problem to you all – do you really spend your days staring at the underside of the PCW?

The six photos were (1) keyboard number keypad 1, 2, 4 and 5 keys (2) disc write protect tab (3) printer power lead socket (4) LocoScript 1 [f5] menu (5) LocoScript/CPM manual spine (6) printer paper feed knob.

The overall winner is Mr. B Watson of Portland in Dorset. He wins an extravagant trip to all the salacious nightspots of the capital city (England's or Scotland's). Five runners up who receive Rubik's Magic puzzles are Mrs. J. Hickman, Wigan; N.J. Green, Chatham; Mrs. M.C. Lyons, Orpington; Rev. David F. Hinson, Stockton-on-Tees; Peter Babler, Coulsdon. Congratulations to all, and thanks to Design Design for sponsoring the competition.

Photo finish

In anticipation of a flood of letters from eagle-eyed readers, we ought to own up to a little artistic licence on this month's cover.

The press release announcing the PCW9512 arrived in our offices on July 23rd, which was (of course) the day after our cover page had to be finished for the printer. The publisher proudly cried, "Hold the front page," and we phoned our printer. We didn't have a photo of the 9512 at the time, so thinking it couldn't be that different to current models we mocked up the tantalising glimpse that adorns the cover and rushed it off to the printer.

Ahem. Unfortunately when the PR shot arrived later for our news pages, there were (how shall we say?) certain differences that even a dustcover over the entire contraption wouldn't completely disguise. Laugh? We thought we'd never start.

Crossed lines

We had a bad month with telephone numbers last month. On the B-drive upgrade article Silicon City's number should have been 087 225 2112. For news of Micro Peripherals' new printer use 0256 473232 instead of the one quoted.

IMMORTAL INPUTS by Brick

8000 PLUS goes on sale on the third Thursday of each month. The October issue hits the shelves on Thursday September 17th.

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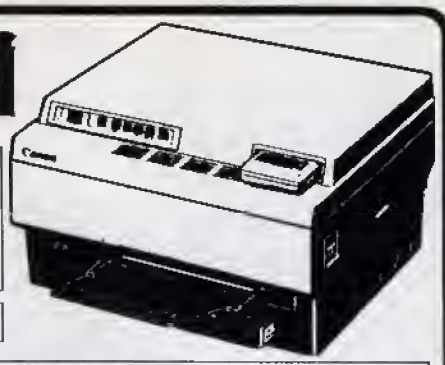

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PCW 9512 – It's official

The secret is out at last. Amstrad have officially announced that they have a new PCW due to be launched in Britain in September – the PCW 9512. It has already been seen by Americans at an office equipment show in Atlanta, Georgia, and Amstrad have now officially announced all the details of the machine that everybody has been speculating on so wildly for the last six months.

And what changes they are. For a start out goes the green screen and in comes a paper white high resolution monochrome monitor – the same resolution as the present PCW's but white on black instead of green on black.

Another surprise is that instead of doing away with the larger double density B drive (as most pundits expected) it has been promoted to become the A drive so you will now be able to store 720k on the main drive into which your start-of-day disc goes. The standard 9512 will only have one disc drive, but there is an option of a second identical drive, which with the standard 512k M drive makes for a powerful machine with a lot of storage capacity – 4 times as much as the IBM PC!

Amstrad state it will be compatible with software on the present PCW A-drive single density discs in much the same way as the present B drive on an 8512 can read an A drive disc. So anyone wanting to upgrade and carry on using their old data files can breath a sigh of relief.

Daisywheel printer

Amstrad have tackled the problem of the PCW printer by including what they describe as a 'high quality daisywheel printer' with bold, double strike, underline, superscript and subscript. It is claimed to print at 20 characters per second, about equivalent to the Near Letter Quality speed of the 8256/8512 dot matrix printer. This is an average sort of speed for daisy wheel printers.

One advantage will be the 15 inch printer which will allow for paper up to 15½" wide, such as A4 on its side – a feature that will suit accounting and legal departments.

The printer fits into the PCW in the same way the old PCW dot matrix does and depends on hardware in the PCW – in other words you cannot use it with another computer. But if you cannot live without a fast dot matrix printer for drafts there is an inbuilt Centronics parallel interface.

While the printer will not be able to support all the fancy LocoScript character set the daisy wheel is a Diablo 630 standard and can be exchanged for other wheels providing foreign language characters for instance.

The other most obvious difference will be in the keyboard. While not exactly the same as the Amstrad PC1512 keyboard it certainly looks a lot nearer it than the old PCW one with much more space to spread out. The function keys and [+] [-] [ALT] [EXTRA] [PTR] and [CAN] are divided off into a separate section at the left.

It is not only the keyboard that has the look of the PC machine. The disc drive (or drives) are housed in a unit below the screen in a way reminiscent of the PC and the monitor certainly has a PC look about it.

More news on page 8...

FREE WITH EVERY 9512

What software comes with the new 9512? Surprise, surprise it will have LocoScript 2 – you didn't really think they had printed that beautiful 300 page manual all about fitting the mains plug to a PCW just for existing users?

More surprising perhaps is the fact that it will also have the LocoSpell spellchecker and the LocoMail mail merger bundled with it, perhaps reflecting the fact that the machine seems to be aimed much more directly at the office environment than previous PCWs.

AVAILABLE NOWHERE

Don't get carried away and try buy one. Although the 9512 has been on show in America it seems that even if you had $799 in your hot little hand at the time it is unlikely you would have walked away with a new machine. You certainly won't get one in Britain before the end of September at the earliest.

Amstrad are still not letting slip little details like what price the 9512 will be in this country although it is interesting to note that the American price of $799 would convert nicely to about £499 at current exchange rates of $1.60. How this would affect the price of the 8256 and 8512 (£399 and £499) has still to be seen although a price reduction is being predicted. All this will be revealed at the UK launch at the Personal Computer World show on September 23 – Amstrad's traditional launch venue.

Amstrad have broken with precedent by launching the machine at NOMDA, the major North American office equipment exhibition in July. This was explained by a rather terse comment from them saying that "as an international company, whose overseas sales account for well over half of our total sales turnover we must choose where and when we undertake important marketing activities without regard to the home market."

That still doesn't explain why it was launched in America where PCW range has hitherto done relatively poorly. Could this be a concerted attack on the US market, or has Mr Sugar another major computer launch up his sleeve? It would never do to have *two* launches at the PCW show.

Mice detailed – Farmer's wife cleared.

Kempston have launched a new breed of tail-less mouse for the PCW. Nothing to do with the old nursery rhyme though. This is a 'high resolution optically encoded mouse' which in practical terms means that it doesn't need a lead to connect it to the PCW, but works by infra-red light beams. You need never disentangle a mouse cable again.

Kempston say that with the controlling software provided, their mouse can be used with a range of software including Fleet Street Editor Plus, Desktop Publisher, Write Hand Man, Micro Draft, Draughtsman and even games like Starglider. It will cost £69.95. For details phone 0908 690018.

PCW Timekeeper

Most people find that once they buy a PCW they have difficulty keeping track of time. But Inform Publicity of Leeds have set out to reverse the trend with a new timekeeping program to help companies keep an accurate record of time spent and thus charges for customer's work.

It needs everyone to fill out an "electronic time sheet" at the end of each day which then breaks down the time amongst the clients which can be printed out. It also allows for a proper control over staff timekeeping particularly handy if the company runs a flexi-time system.

The program costs £80 . Inform Publicity can be found at 0531 571491.

Instant intelligence

Want to pass on your years of expertise and knowledge in Llama Breeding to future generations? Or better still do you want to have someone else's years of expertise and knowledge at your fingertips?This is possible according to Swallowsoft Software who have just launched a expert system shell suitably named WiseOne.

This £34.95 program is claimed to be an introduction to the world of artificial intelligence and "knowledge engineering" and is really intended for dreadfully serious subjects like taxation, or fault diagnosis. You get a Knowledge Builder module which allows you to create definitions and rules using the WiseOne language, checks them and produces the "Knowledge Base".

Once you (or somebody else) has set up the rules, you can consult the expert system as though it were a human expert (in theory), asking it to solve problems and explain its solutions. It also allows the Knowledge Base designer to progressively develop and test it.

For more information contact Swallowsoft, PO Box 107, Walton-On-Thames, Surrey KT12 5PQ.

"With reference to...."

Anyone who feels the need to index their 104 page letter to 8000 Plus might be interested in the new indexer from Dogsbody Software of Merseyside. The Dogsbody Indexer, costing £45, is designed to be used when you have a book at manuscript preparation stage and is planned as an easy way to keep track of your entries.

The idea is that you type in the first entry with its page number. Then if you have to add another entry you just type the first three letters and the new page number and this is added automatically. It also allows you to select one-key symbols for style-choices (italics, bold etc.) Should you want to swap things round the index converts into a LocoScript document for editing. For details phone 051-608 8175.

Statistics can be fun

Statistics? Fun? OK. Settle down now. Joke over. Well those are the exact words Goode Software use to introduce their new statistical package Quasar II. They do have the good sense to add a "well almost" at the end – there is such a thing as the Trades Description Act.

It is an attempt to take the drudgery out of statistical analysis. The company claim it as a break through in price at £22.95 and suggest that the program would be equally useful for experienced statisticians and beginners. The 70 page manual has a number of examples to help you find your way.

Statistics does seem to be a major growth industry just now so if you don't want to miss the band-wagon phone 0222 35820 and you too can start having fun.

Merger mania

HPA Systems, the company that specialises in programs that make full use of LocoMail's more obscure commands have launched Enhancer, a four field database written in LocoMail with positive and negative filters and a fast conditional letter facility. They have even simplified LocoMail commands by using the PHRASES.STD file.

This allows people to get to grips with LocoMail quickly and easily and could meet the needs of people needing simple databases. It is defined as a cross between a restricted non-relational database with good calculation and report formatting or a friendlier mail-merging word processor. Whatever category it finally ends up in it only costs £14.95 (if you already have LocoMail) and can be bought with LocoMail for £44.95. If you are interested phone 08697 508.

Sharp with The Knife

The prize for the first press release to mention the fact that they have software for the new PCW 9512 goes to HiSoft. They list the 9512 as one of the machines compatible with The Knife Plus, an upgraded version of their disc editor. It can also be used on boring old 8256s and 8512s.

If you read our disc repairing article last month, you will know what to expect when Hisoft say that extra features include a sector copier which allows you to copy defective discs ignoring bad sectors, and the build-file commands which let you choose sectors or blocks to be copied one-by-one to a new file on any drive allowing you to selectively recreate your corrupted files.

There is also a new price – £19.95. For details phone 0525 718181.

PCW on the move

◀ The Crown Dust Cover carrying case.

The Crown Computer Products carrying case. ▶

We have been inundated with announcements about PCW carrying cases all from companies called Crown. The fact is there seems to be two companies in this field who have by a strange quirk of fate the same name and who have both launched new carrying cases in the same month.

Crown Dust Covers of Williton, Somerset have announced an improved version of their carrying case with extra foam padding and stronger webbing straps and release clips all for the same price of £39.95. They are so confident of their product that they are offering to send out the case on approval and refund the return postage in the event of a return. For details phone 0984 3377.

Crown Computer Products of Ormskirk (no relation) have told us about their £19.95 case with reinforced protective sides which is claimed to be stormproof and folds down when not in use. For details phone 0704 895815.

So you need never be without your PCW again – assuming you're fit enough to lift the thing off the ground mind you.

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DATA BASICS

Everybody needs a database, but the choice can be bewildering. Rob Ainsley cuts through the jungle and reveals which is the right one for you.

Any survey of PCW owners shows that a database is the single piece of software most in demand after word processing. Properly used, databases can make producing catalogues and lists consummately easy, but some databases are only suitable for certain types of application. Pick the wrong one and you could end up tearing your hair and junking your PCW. Before you jump in the deep end you need to learn to ask the right questions and plan out very carefully what you intend to do.

Almost anyone who owns a PCW could use a database to organise the information in their life. In addition to business-people who would find computerised details of customers, suppliers, stocks and so on invaluable, there must be thousands of innocents cajoled into club secretary positions solely because they've "got a computer". If you've bought your machine for writing your first novel or your thesis you may well require detailed character lists or bibliographies, and even casual letter-LocoScripting hobbyists may have collections of books or records to catalogue.

There are various types of database software available, from simple 'user-friendly' card index systems, through 'free text' databases which index wordprocessed files for you, to specialised database programming languages which let you manipulate your data in any way you can think up. If you're au fait with BASIC you could have a go at writing your own filing system using the JETSAM facilities supplied for free, and devise a package tailored to your own particular needs.

What is a database?

As 'data' means 'information', so 'database' means 'a load of information'. A computer, looking at the Manchester Phone Book thinks, "Ah, a telephone subscriber database, indexed by name, selection criteria being Manchester addresses." Usually though a database means disc-stored information, although BT's Directory Enquiries now have their phone number lists on computer too.

Obviously having your data on computer rather than scraps of paper could be saving you hours of tedious work manually sorting out cards from folders and getting parts of it laboriously copied out and typed up. This comes at a price: you have to decide a structure beforehand – how many letters to allow for each name and address, how many different items of information for each record, etc – and you have to stick to it rigorously, with every record containing exactly the same number of headings and types of information.

On the other hand, there are pluses to a filing cabinet; you can rest your coffee on top of it, and bang your head against it when you can't get your database to work.

With the price of a database being anything from £20 to £100 it's wise to have a good hard think about why you want one and what you want to use it for – is the only output you require a simple list onto a sheet of paper, or will you be wanting to produce labels and other exotic layouts on weird paper sizes? Do you need to sort the information by several different criteria, or in alphabetical order? Do you want calculations done for you? How expensive a package will the amount of use justify? How much time and effort could you put in to learn the workings of a powerful but complicated system?

Database basics

The essentials of every database package, from the beginner-oriented cardboxes to the programming languages, are the same. On your disc you have the program files and, hopefully, copious examples for you to play with to get a feel for the workings of the thing.

Creating a new database of your own is both the first and the hardest thing to do. It's easy to get carried away with the euphoria of your new toy right up to this point of setting up a new database, only for your optimism to vanish when faced with terse questions like 'How many fields do you want?', 'How many letters in this field?', and 'How many records altogether are there going to be?'

Databases are the ultimate bureaucrats; they can only handle information when it's presented to them in a constant layout, exactly like those accursed forms you have to fill in every time you have teeth or money extracted. Consequently they can be amazingly thick at times and must have everything told them in triplicate before they do anything rash like actually storing your information. Advance planning is essential, and you have to work out with pencil and paper exactly what details you are going to store and how they are to be laid out on the screen before tearing into your package.

Setting it up

Let's say you are looking after the records for a book club. You want a list of people who've bought books from you, together with their addresses, the titles they have bought, and the balance due on their books. You might use this information to, for example, send money-chasing letters to nonremitters, to send catalogues of new books to big spending customers and tailor the subject areas of the catalogues to their interests, based on the books they've bought up to now, or to see which books are selling best.

You would probably settle on the following categories:

Name:	Slobodan Wszczkwycz
Street:	16a Szczeczin Crescent
Town:	Didcot
County:	Oxfordshire
Postcode:	OX15 8WZ
Orders:	Dwyle Flonking Yearbook, 100 Great Flonkers, The Joy of Flonking
Total order:	£66.53
Received:	£41.79
Balance due:	£24.74
Last payment:	4 Aug 87

The proper way to describe this layout necessitates a bit of jargon-busting. The analogy usually given to explain database terminology is that of a box of cards, each containing items of information about something or someone – a name, address, club membership number, interests, and subs paid for example. All these details are stored on disc as a 'file', equivalent if you like to a file or drawerful of cards. Each 'record' would correspond to one card in the file, and a 'field' to one item on the card – name, membership number or whatever. Databases with just this setup are called cardboxes.

Before you can enter any data into the database you have to give the details of the intended layout. Specifically, for the example above, this means telling it the number of fields (here 10), the length of each field (the maximum number of characters you'd need to use, say 25 for the name, 12 for the town and so on) and the type of field. Most packages distinguish between 'character' fields (the name, county, and orders fields in the example above), 'numeric' fields (for the money items etc) and 'dates' (as in the last payment field). More advanced ones can do arithmetic calculations on numeric items, so here you could have the balance updated automatically for you by the computer every time the record was amended, eg. every time a payment was received. Naturally, much more complex calculations than this are often possible, credit and interest payments for example.

At some point you'll be asked which field you want to be the 'key' field. This is the one the used for identifying each record, often the name – 'Mr Wszczkwycz's record'. To make life easier only the first few letters usually need to be typed ('Wszczk' is enough to identify the name).

Having set up and saved this structure on to disc you can then start entering the data for each member of your club. Changing, deleting, and editing the entries once recorded is easy, though you can't usually change the basic layout (number of fields, etc) without setting up a whole new file.

Report forms

Eight hours, twenty-four cups of coffee and three inadvertently erased discs later, your data is all safely stored. You make your back-up disc (of course, how could you do otherwise) and set about displaying and printing out some of these records. Many databases call this procedure producing a 'report'.

To do all this you must tell the machine how you want the various fields to be arranged on the paper. You usually have a number of formats you can define, so that one might contain all the above information with suitable headings, another just the name and address for label printing. Again, advance planning is vital.

Then the hard work's done, in theory. First you might try printing out every record in our example in alphabetical order of name. Then you could re-sort the file in order of balance due, or amount of orders received, or alphabetically by the name of the first book in the list; some programs will do this almost instantly (perhaps not very instantly for long files), some won't do it at all. Having done that you could print out a simple list of clients, money spent, and books, one entry to a line, in descending order of money, to see your top fifty big spenders, and perhaps tot up all the balances due over all clients.

'Selection' is common to virtually all databases: as well as picking out single records to print, you can select groups – just those records with a London address, and/or those containing the letters 'flonk' in the Books field, and/or those showing a balance due of more than £20 and no payments for two months, for example.

Importance of exports

Having selected your miscreant non-paying Londoners, you can mail them all at a stroke by 'exporting' the data to a word processor's mail merge facility. By setting up a suitable letter framework all the names and amounts owed will be inserted automatically at the right places and you can print out the address labels at the same time.

Most databases have the facility to 'import' and 'export' data – to send or receive data to or from other files. In this way you can send those names and addresses to your mailmerger, add data from one file to another, and so on. Alternatively you could use a word processor to tidy up a database's output by adding underlines, bold and so on before printing the report out. Perhaps most importantly, when your database program (or, gulp, your PCW) is superseded by some superior package or machine in the future, you can simply transfer all your precious data to a new package (or new machine) instead of having to flush it down the lavatory and start again from scratch.

Happy to relate

Advanced filing systems can handle 'relational files' – the information from one file can be related to another file automatically. So, suppose you run a book acquisition service. You have a list of books stored on a database, each title being listed with the publisher and brief description of its subject matter. On another database you simply list each publisher with their address.

Customers come in to you and say "What books do you have about marsupials?" You then use your first database to list out all appropriate titles. If you want to actually order some of the books, you will need to know the address of the publisher for each title, and this is where the relational powers come in: you can instruct the program to produce a report with the book title as found in your first database, and then it can automatically look up the address of the correct publisher in the second database and print that out alongside the book title. The benefit of this is that in a conventional (non-relational) database you would have to retype and store the address for the publisher into every individual book, so the relational approach saves you wasting space storage space and typing time.

Bottom line

It should be clear that, if you're handling a lot of data, the time, effort and tedium saved by using a database to organise it all will be enormous. Once you've spent a few hours getting to know the package and channelling in the data, then printing out and manipulating the lists can be done breathtakingly quickly and easily. If you're so inspired by all this that you want to know which database is for you, ▶

Etymology note

Arguments rage over whether the word 'data' should be singular or plural. As the nominative neuter plural of the perfect participle of the Latin word 'dare', to give, it should strictly be plural; however, as it means nothing more or less than 'information' in plain English (but seven letters shorter and infinitely more hi-tech) it feels better treating it as a singular 'mass' noun.

LocoNote

Inevitably, LocoScript is peculiar about the way it can send and receive text with databases. You will have to convert LocoScript documents to ASCII files in group 0 of your disc before any CP/M program can read them. If you want to read a database's output into LocoScript, you can use the 'Insert Text' command while editing.

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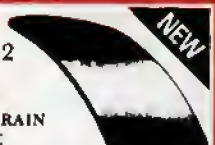

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3½" × 15/16"	2 across	12,000	£52.07
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If you find all this database business a bit daunting you may well be drawn to this package specifically aimed at the first-time user who wants a gentle, easy system to work with which will nevertheless produce good quality results. The initial menu offers three simple choices: create or use a database, or exit. Creating a database is extremely simple – you move your cursor around and write in headings where you like, specifying the length and position of each record by filling in a block of characters as required. You don't have to worry about specifying how many letters so-and-so field is, or decide in advance how many fields you want; the computer works all that out for you on the basis of the card format you map out. After nominating the key field and filling in your data entries you can search for individual records, browse through, or select groups and individual records by hand for output. The file can be listed in order by the key field and you can change the key field later if you want.

All these functions are called up by control codes, ie. [ALT]-N displays the next record in the file, [ALT]-D deletes a record, and so on. There's a help menu you can call up any time if you forget what the codes are, but the formulae are easily picked up.

Brahms and list

Printing out your records is easy – you can print out lists of one-line selections from the fields (eg. Name, Address, Telephone number) and insert headings wherever required. You can even produce totals of figures at the bottom of the program, very useful for producing reports. Unfortunately to get more complex printouts you have to use LocoScript to create a template, which can be awkward. In general though, if you want more than simple lists from your data you'll be disappointed.

There are a few restrictions on such a simple program, for example all fields are treated as character strings, so that numbers may be indexed in a strange way (£9 would come after £8,917,744.03 for example). Names have to be entered surname first, as there's no other way to specify the surname as key, unless you record given names and surnames in separate fields.

```
Name: MacDonald, Ronald    Balance owing: £595,77    Last payment: 4/6/87
Name: MacEwan, Eric        Balance owing: £ 24,63    Last payment: 5/7/87
Name: Makarios, Andreas    Balance owing: £ 53,66    Last payment: 25/12/86
Name: Michaels, Geoffrey   Balance owing: £  0,00    Last payment: 13/4/87
Name: Miller, John         Balance owing: £402,00    Last payment: 11/6/87
Name: Miller, David        Balance owing: £  0,00    Last payment: 6/8/87
```

Because you use LocoScript to create report layout templates you can do simple mailmerging directly from the database without needing to buy a mailmerger program. Import and export facilities are supplied, so you can swop data around between your files and other programs and save all your information in case you decide to upgrade to a more powerful package later on.

How friendly?

The manual is rather disappointing. The 'learner friendliness' of First Base lies not so much in presentation as in essential simplicity of the program – if all you want from your database is a hi-tech address-book or computerised catalogue, with the ability to select and print certain records, and possibly use the information in mailshots, this will be perfectly adequate. There might be less justification for buying it as an introduction to databases with a view to upgrading later, however, as many of the more powerful packages (Masterfile 8000, Cardbox) are still quite friendly or better documented, and others are more versatile for the same price. Nevertheless, this particular product could be just the thing for reluctant club secretaries who need to organise fairly simple and standardised (but lengthy) data without having to plough through more involved programs against their will.

PLUSES
- Straightforward and simple to use
- Can produce totals
- Data can be included in mailshots
- Good for record look-up and browsing

MINUSES
- Printed output not so good
- Manual not so learner-friendly

RANGE OF FEATURES ■■■□□ PERFORMANCE ■■■■□
EASE OF USE ■■■■■ DOCUMENTATION ■■□□□

8000 PLUS VALUE VERDICT ■■■■□

CARDBOX
£59.99 • Caxton • 01-251 9494

Cardbox has long been a traditional yardstick by which many database packages are measured. It's beginning to show its age now but is still a good, fast system.

As implied by the name the whole program is very much oriented to a cardbox format; when setting up a new document you need a format first and the number and lengths of each field are defined implicitly by the length and position of blocks you earmark on your screen. You can rule lines too, though not continuous ones, by various combinations of control keys. The fact that you can put the fields anywhere you like on the screen means you can design layouts exactly as you wish. The entire program is control-driven but there are plenty of on-screen prompts and although the logistics of getting from one place to another may seem a little odd if you're used to other packages it all works smoothly with a little practice.

There is a large example file which will repay time spent playing around there amply; it's the best way to get to know the structure of the package.

The old order

The major drawback is that the cards are always stacked in the order they were entered; there's no sorting facility. Selection of cards is done one stage at a time in levels – if ▶

you want a list of all London customers in Accounting, you first select the London addresses (level 1) and then the Accountants among them (level 2). You can jump up and down levels easily and when you come back to a file it kicks off at the last level you left. They'll always come in the same order, though, so printed lists may not come out as efficiently laid out as you'd like. However, you can search or select for records by any criteria you like, including looking for individual words within a longer string.

Printing the records can be done according to any number of formats you want to define, and you have the usual ability to pick off any number of fields from the main card you require and print them out in various ways, one record to a line, or a page, with or without headings etc.

PLUSES
- Quick and easy to use
- Good control over screen layout
- Fields can go anywhere on card

MINUSES
- No calculation ability
- Can't re-order at all
- Expensive for what it does

RANGE OF FEATURES ■■■□□ PERFORMANCE ■■■■□
EASE OF USE ■■■■□ DOCUMENTATION ■■■■□

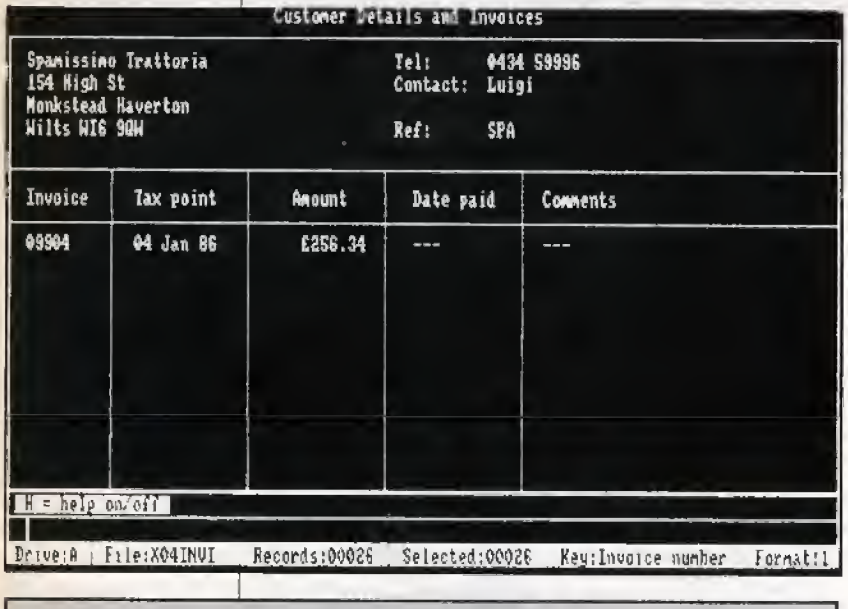
8000 PLUS VALUE VERDICT ■■■■■

Your data can be exported in a variety of formats including ASCII and WordStar.

If your present database is a physical box of cards and want the power simply to select, print (or mailmerge) entries very quickly without sorting – for example, writers keeping catalogues of reference books or character descriptions or club secretaries looking after membership records – this could be well suited to your needs.

MASTERFILE 8000
£49.95 • Campbell Systems • 0378 77762/3

As a database, Masterfile 8000 is very hard to beat. The program comes supplied with abundant examples and you can spend your first couple of hours merrily playing around with them and getting a feel for the program – you only have to refer to the manual when you really need to. The program is menu-driven and is easier to use than many, though menus can get tedious after a while.



On defining a new file you follow on-screen prompts to enter the conventional things like number of fields, type and length of each one, and enter your data in the usual way. The fun part starts when you begin to define your 'formats'; Masterfile arranges your fields for you in a line-by-line order and calls this 'Format 0', but you can define up to nine more, and include in your format boxes, lines, panels, headings of different sizes, and arrange the data in virtually any way you like – the process is fiddly and time-consuming but worth it for the control you have over the finished article in layout. All the fields are stored in format 0, but you can select any number of them to include in your various formats, so use one for address labels, one for invoices, one for customer descriptions, etc, all taking different items of information, all different presentations of the same data. When displaying the records you can rotate through the formats used to show the data by pressing R.

Friendly sort

Sorting can be done by any of the fields and is done very quickly. To print you just rotate to the format and sort order desired and press P. You can, of course, select records on a range of fields and criteria, simultaneously if you like (all those living in London who also owe you money, etc), then label and store these sub-sets for future use if you like.

Calculated fields can be included too – you set these up as part of your formats, though the values are not calculated automatically but are revalued whenever you select 'C' from the main menu. Full import/export features are also included.

In the data handling itself there are some very clever and useful features. The problem of name indexing is overcome by entering them as, for example, 'Wszczkwcz<Slobodan' which causes the name to be printed always as 'Slobodan Wszczkwcz' but indexed by the surname Wszczkwcz. Addresses can be entered as '15a Szczeczin Close_Didcot_Oxfordshire', which will print out each of the items separated by a _ on a new line if there's enough space, and by a space if not. Saves having to separate addresses out into different fields (street, town, county etc)

PLUSES
- Re-indexes etc rapidly
- Printed output can be impressive
- Relational files
- Names and addresses handled well
- Good example files to browse through
- Calculated fields

MINUSES
- Size of files limited by M drive, not so good for 8256s

RANGE OF FEATURES ■■■■■ PERFORMANCE ■■■■■
EASE OF USE ■■■■□ DOCUMENTATION ■■■■□

8000 PLUS VALUE VERDICT ■■■■■

addresses out into different fields (street, town, county etc) which never suit everyone's address and cause a lot of wasted space.

Good relations

There's also the extremely powerful ability to link files up relationally, so that information from one can be included in another automatically even if the included information has been updated since last using the main file. This can be one of the most effective facilities of the program if used efficiently.

All in all this is a splendid package which is difficult to fault. It's simple enough to be used by novices to databases and yet powerful enough for virtually any use you could reasonably want from a database package. If you can afford the money, this is for you, whatever the application.

Sorting v indexing

There is a lot of confusion over the terms 'sorting' and 'indexing' (sometimes called 'keying') in databases, which isn't helped by the fact that some manufacturers use the words interchangeably.

dBase II uses the words in their strict sense: when you use the SORT command, the data file is physically shuffled round so that the records appear in a new order. This can take a long time. The INDEX command, on the other hand, doesn't touch the data file but makes a note in a different file of what order the records come in. This allows the program to find data much faster than if there wasn't an index, and isn't as slow as proper sorting.

In some databases (such as Database Manager/AtLast) indexing and sorting are the same thing – when you choose one field as an index all data is then presented in that order.

In Cardbox, indexing is an internal mechanism to make finding particular records faster – it doesn't actually affect the order that the cards appear in.

Finally, Condor (a kind of dBase lookalike form Caxton) can sort data, but can't index it for speed of access.

dBASE II
£99.95 • First Software • 0256 463344

dBase is not so much a database program as a database programming tool. On running the program disc a full stop appears on the left of the screen; this is the prompt and you create, manipulate and print out your data via various commands, which, just like BASIC or any other programming system, you can combine into programs and save for re-use.

For example, the command `.CREATE ZAP` will set up a file called ZAP, and cue in the usual prompt questions about number and size of fields. You can immediately start entering data if you wish, but to add to an existing file you would enter the command `.USE ZAP` and then `.APPEND`; `.EDIT` will allow you to correct mistakes or update entries, though you have many advanced facilities which allow you to amend a batch of records by a single command instead of laboriously amending each one as in normal packages. Nice to be able to change "Windscale" to "Sellafield", for example, in 4,719 records at once instead of doing them all individually!

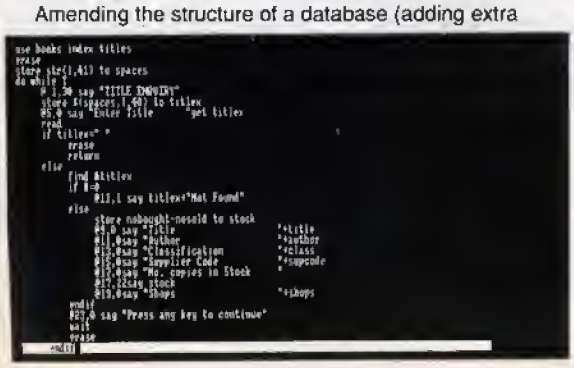
At your command

Now suppose you want to send a catalogue of the 1988 titles coming out on dwyle flonking to members of your book club who might be interested enough to buy. You may decide to list out just the names and addresses, in name order, of all members of your book club who have spent over fifty pounds with you, live in London, and have ordered books on dwyle flonking. You can do this at a stroke by entering first `.USE BOOKS INDEX NAMEIND` and then `.LIST NAME, ADDRESS FOR ORDERS>50 .AND. "LONDON"$ADDRESS .AND. "DWYLE"$BOOKS .OR. "FLONK"$BOOKS`. Although this seems longwinded, you can store it in a file (perhaps called MAILSHOT.CMD) and repeat the mailshot at any time by typing `.DO MAILSHOT` – ie. re-run the commands stored in MAILSHOT.CMD.

Most databases can handle elementary calculations; dBase can do very sophisticated counting and totalling. You can sum over any field or part of a field of your records, store and re-use the information later. All this can be printed out, of course, with plenty of format control.

Amending the structure of a database (adding extra fields, changing the layout significantly etc) is something many large-scale users would have to do from time to time, and this can be done in seconds on dBase. On most cheaper packages it is virtually impossible. dBase is a relational database, and you can work with two database files open at the same time. This has many powerful applications as outlined previously.

The range of functions in dBase is unequalled by any conventional package. The ability to write your own programs means you can prepare powerful procedures which are easy enough to be used by complete novices (not all shop assistants are mad keen on taking courses in using databases). The language is logical and simple – if you can write a BASIC listing to add two numbers together dBase will be easy – and the manual, if a little daunting, is pretty good. The only drawback, of course, is that you have to be prepared to put the time and effort in to develop your programming proficiency. ▶



PLUSES
- Extremely powerful at manipulating data
- Can write programs enabling use by novices
- Sophisticated counting and totalling facilities
- Large databases can be handled
- Easy to alter structure of a database

MINUSES
- Requires programming skill

RANGE OF FEATURES	■■■■■	PERFORMANCE	■■■■■
EASE OF USE	■■■■□	DOCUMENTATION	■■■■□

8000 PLUS VALUE VERDICT ■■■■□

The best of the rest

There isn't room here to review every database ever written, and there are of course many others. You might like to read our quick selection chart on page 16 to guide you to the best buy, or read the Good Software File databases section at the back of the issue.

A hard program to ignore is AtLast, a good, fast, versatile package which would suit any general database use and is particularly well adapted to handle names. Though the manual isn't vastly helpful and the first couple of hours won't be as easy as with First Base, it's still amazing value for money.

Microfile, part of a collection which includes labelling, spreadsheet and wordprocessing programs, is also very good value, a good standard database which is maybe showing its age a bit now.

As for the bigger, programmable packages, Condor or Delta would be better than dBase if your applications require a lot of fields (Condor can take up to 127, Delta up to 90, including repeats if desired, to dBase's 32) though neither is quite as fast at indexing.

If you have large tracts of text rather than easily compartmentalised name-and-address data to file, you could have a look at FT=DB and Chibase. Both index your text files by keywords you select from the text, enabling you to call up any relevant passage according to the keyword and print it out or insert in the document you're writing.

PICK YOUR OWN

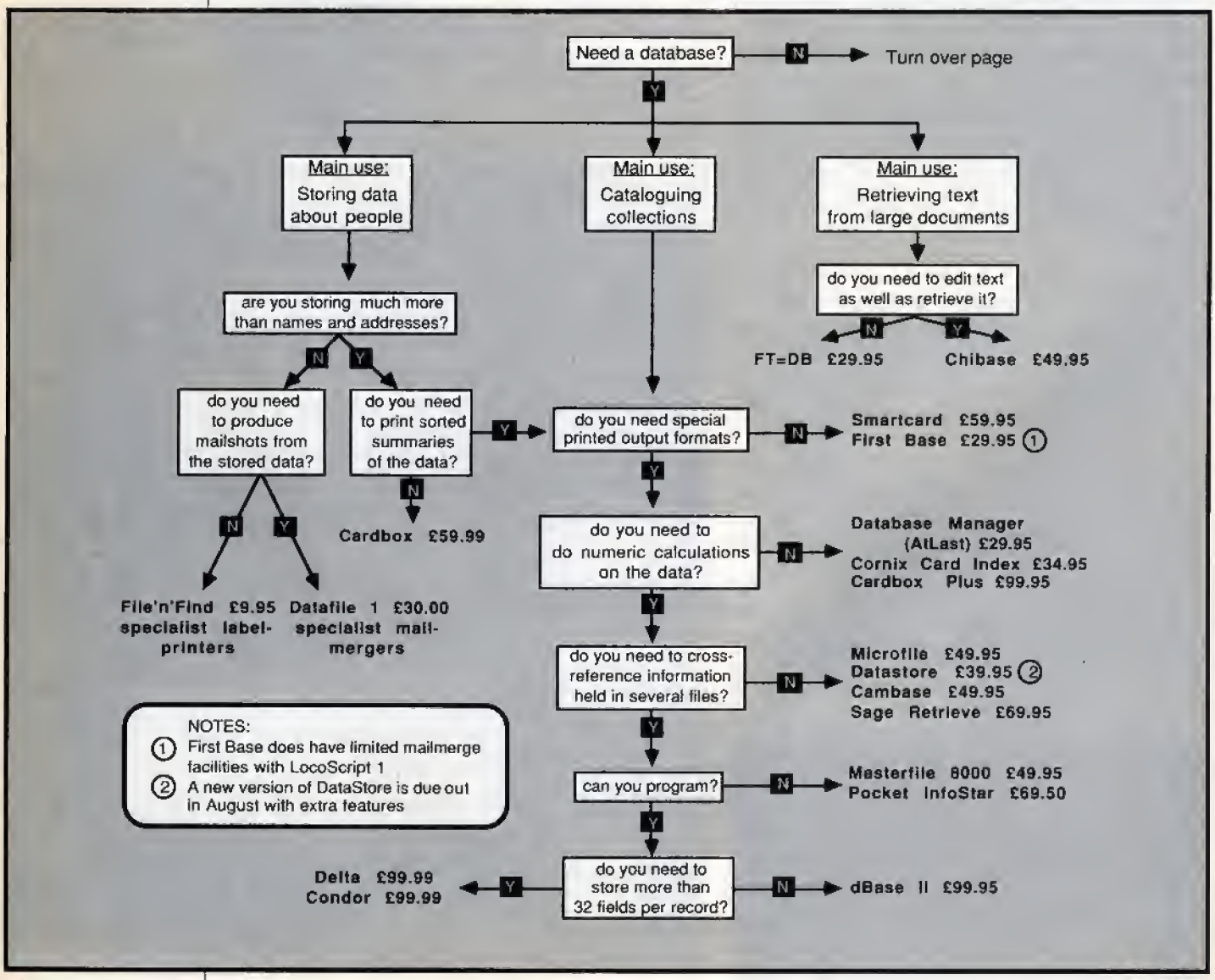
So you've decided to buy a database. But which one is the best for you? Avoid an expensive mistake by following our quick decision chart.

Picking the right database is very important. There is no such thing as the 'best' database, because which particular one is the best for you depends on what you are going to use it for. We've set out to make it easier for you with this chart which takes you through the decision process – it's fairly self-explanatory, so read down the tree from top to bottom, and at every question follow the 'Yes' or 'No' branch appropriate to your answer. You should end up refining your choice to two or three different packages suitable for the job in hand.

When using the chart remember two things: first, the more powerful databases (towards the bottom of the chart) can of course do all the simple jobs too, so you might want to get a package which does more than the minimum you think you need so that you have 'room to breathe' if you find yourself using your database for other things later on (conversely, the more features a database has the more involved it is to use). Second, it is not possible to include ratings for ease of use and effectiveness with each package – the fact that it appears on the chart doesn't mean it is a perfect program. Read the short reviews in the 'Good Software File' for more details on each, where you will also find a contact telephone number there, and a willing salesman on the other end of the line eager to take your money.

A final word of warning: make sure that it really is a database you want to buy. If all you want to do is send out mailshots to a customer list, you would be better off with a specialist word processor/mailmerger/label printing program. If you are going to try to collate payment records on the database and calculate your cash flow for the year, you may be better off with a spreadsheet. Think before you leap, and happy databasing! EXIT

8000 PLUS RECOMMENDED DATABASES
Best for address lists: Database Manager (AtLast)
Best for cataloguing collections: Masterfile 8000
Best general purpose database: Masterfile 8000
Most powerful and flexible database: dBase II



MASTERFILE 8000

FOR ALL AMSTRAD PCW COMPUTERS

MASTERFILE 8000, the subject of so many enquiries, is now available.

MASTERFILE 8000 is a totally new database product. While drawing on the best features of the CPC versions, it has been designed specifically for the PCW range. The resulting combination of control and power is a delight to use.

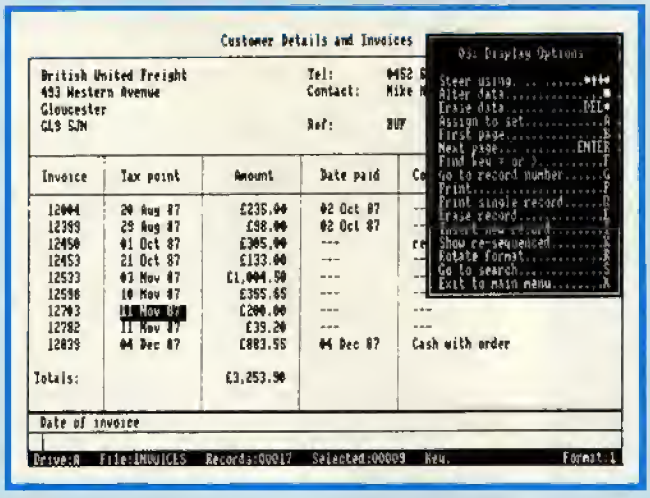
Other products offer a choice between fast but limited-capacity RAM files, and large-capacity but cumbersome fixed-length, direct-access disc files. MASTERFILE 8000 and the PCW RAM disc combine to offer high capacity with fast access to variable-length data. File capacity is limited only by the size of your RAM disc.

A MASTERFILE hallmark is the provision of multiple, user-designed display formats. This flexibility remains, but now it's even easier. With MASTERFILE 8000 you design your formats "live"; no more questionnaires, just move your format effects around the screen using the cursor keys!

Record updating is even easier than before — just steer your cursor to any field on the screen and then insert/erase/alter as required.

Special options are provided for handling dates and surnames, and column totals can be generated.

All screen work is done graphically — and hence we offer unique panel, box, and ruled line options. Choose the line spacing at pixel resolution — you will be amazed how much clearer 9-pixel lines are than the usual 8-pixels. (Study the picture.) And all this faster than CP/M normally lets you paint the screen! PCW printer functions, under menu control, are provided.

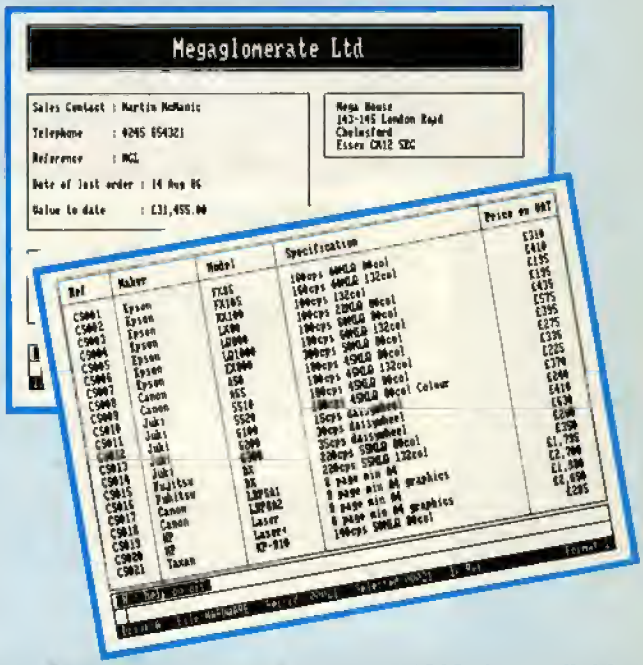


Keyed files are maintained automatically in key sequence, with never any need to sort. You can have unkeyed files too, where records can be inserted at any point in the file.

Any file can make RELATIONAL references to up to EIGHT read-only keyed files, the linkage being effected purely by the use of matching file and data names.

You can import/merge ASCII files (e.g. from MASTERFILE III), or export any data (e.g. to a word-processor), and merge files. For keyed files this is a true merge, not just an append operation. By virtue of export and re-import you can make a copy of a file in another key sequence. New data fields can be added at any time.

File searches combine flexibility with speed. (MASTERFILE 8000 usually waits for you, not the other way around.) You can even assign subsets of a file into one or more of seven pigeon-holes for subsequent reference or further manipulation.



FIELD-TO-FIELD CALCULATION is available, using any mixture of terms and arithmetic operators + — * / ( ).

MASTERFILE 8000 is totally menu-driven, fully machine-coded, and comes with example files and a detailed manual. We claim (modestly) that you will not find another filing system with such power, flexibility, and friendliness.

MASTERFILE 8000 costs £49.95 including VAT and P&P to anywhere in Europe. Elsewhere please add 20% for air-mail service. ACCESS/VISA/MASTERCARD orders are welcome, written or telephoned, quoting card expiry date. Make cheques payable to "Campbell Systems".

Our normal response is return of post, 1st class.

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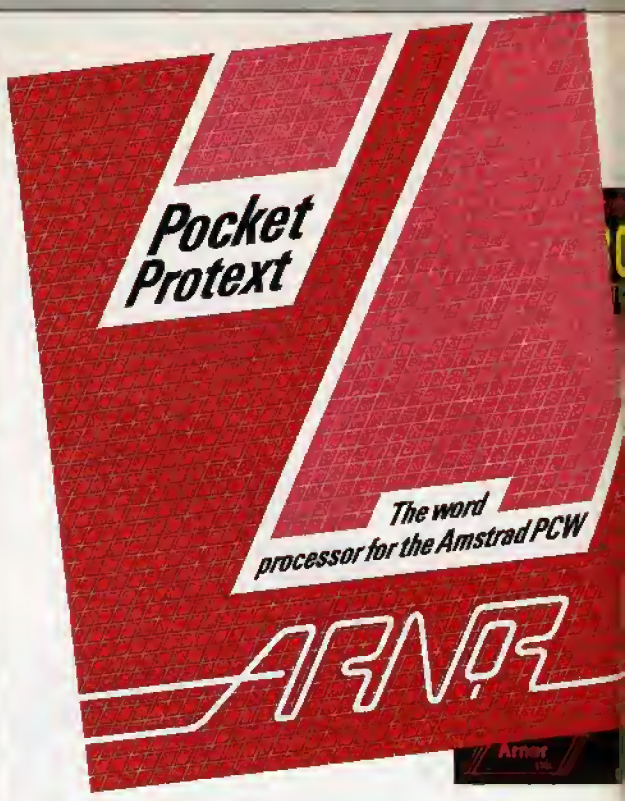
England. Tel: (0378) 77762/3

PICK POCKET

Can't afford £79.95? Those nice Arnor chaps have released a cheap version of Protext – Alec Rae, who has processed a few words in his time, has a look.

PCW Protext appeared on the market in January as the word processor for the person who wants everything. It had all the sophisticated extras you could think of built in – a mail merger, spell checker and a host of fancy little features that made for faster word processing.

Now Arnor have decided to put out a cut-down version, minus the frills. Has the fat just been trimmed off, or has the baby been thrown out with the bathwater? Can we think of any more metaphors to mix? It seems like a good time to take another look at the pros and cons of the Protext philosophy.



POCKET PROTEXT
£39.95 ● Arnor ● 0733 239011

The first thing to say is that if you are serious about word processing you should, at least, have a look at Pocket Protext. If you only knock out an occasional letter then it is probably not worth while thinking about it, but if you do write a lot and are prepared to make the effort to get to know Pocket Protext it should repay the investment.

But remember Protext is an investment in time as well as money. The more time you spend learning the system the more time you can save. And the savings in time can be considerable – for there is no doubt that it is the fastest word-processor available for the PCW in virtually every department.

Top of the format

For historical reasons Protext allows you to format discs in Amstrad CPC format. This may not sound useful ,but in fact PCWs can read and write to them quite happily, and you get an extra 5k of space per disc. The only thing you cannot do with a CPCs format is use it for a Start of Day disc.

▲ Working on Protext.. The text area normally fills the screen, but is split to a half screen when you stop to give commands like wordcount and disc directory as shown.

Don't be fooled into thinking that because it is missing a couple of features (see the box) Pocket Protext has lost any sophistication. It is the same fast, powerful program with many features that have proved popular with PCW Protext users. But these have to be learnt.

You don't have the homely LocoScript menu system to fall back on. In Protext you learn the codes and use them. With a little regular use they become second nature but it does require a period with the help prompts showing on the screen or the manual open beside you before you feel really confident.

Spoilt for choice

Another complication comes from the fact of Arnor being almost too helpful. LocoScript users, for instance, are delighted to find that many of the keys like [FIND], [COPY], [PASTE] etc have similar uses in Protext. But if you are more used to WordStar-type commands and your finger constantly strays to the [ALT] key you will find many similarities here too.

This does mean that there is a profusion of choices that can be confusing to the beginner. At the end of the day you find that whether you type DIR (a la CP/M), press [f1] (LocoScript) or even type CAT (to make Amstrad CPC owners feel at home) you will get a directory of files. You just have to decide which one suits you best and then stick to it.

Most non-Protext users will probably think that the speed of any package depends on the actual speed that you can move the cursor round the screen and there is no doubt that in this area Protext is outstanding. At times it can move so fast that it is difficult to control – for instance if you let your finger dally on the 'move a word to the right' key you can find yourself several paragraphs down the page. The lightning speed with which you can move from one page to another will also be a pleasant suprise to someone who has grown up with LocoScript scrolling.

And yet you probably save as much time from the little touches that Protext gives you. There is a full variety of 'Delete' commands (delete line or block, delete to end of line, delete from beginning of line) allowing you to cut as much or as little as you want and just as important it often

allows you to Undelete when you have got too enthusiastic.

But what about the simple occasion when you get two letters out of order? Instead of tortuously deleting one and replacing it in the right place you press [ALT]-A and the two are swapped for you. It is a trick that you can become so unconsciously reliant on after typing a page of 'hte' and 'nad' that you will start trying to use it in other programs and cause total havoc, usually ending up with a line of Greek characters!

Just as simple is the ability to change a lower case letter to upper case and vice versa in one simple keypress. Super-accurate typists might disdain such touches but finger weary journalists find them a god-send. And brain weary journalists have been known to weep with gratitude at the word count which is so simple and quick to use that you can find out in seconds whether you have written enough words to fill the review (*sorry, you're only half way there – Ed*).

"Take two letters...

It might sound a bit vague to say that you can edit two files at once, but when you discover that you can switch from one document to another at the press of a key and move text from one to another in seconds you soon begin to think of uses for it – for example a jotter and doodling pad for your brainwaves.

There are time saving features beyond the obvious area of getting words into files. The file handling facilities are well organised and slick; Protext doesn't have LocoScript's 'groups' idea to as large an extent, but you can partition files into 16 user areas which gives you the same effect. Protext also has simple and effective Copy and Erase facilities that you soon find yourself forgetting about PIP and organising all your discs with Protext. You can format discs in Protext too.

Anything wrong?

Sounds wonderful. So what are the disadvantages? Well for a start Protext doesn't mollycoddle you the way LocoScript does. You can learn LocoScript by logically working your way through the menus. That doesn't apply with Protext and you really have to open the manual (gasp!).

Admittedly there have been some improvements to the manual since Protext was first unleashed, most notably the addition of an invaluable index, but it is still not really written with the beginner in mind. Computer buffs may be quite at home with the concept of the 'ambiguous filename' often mentioned but the beginner could be confused by this ambiguous wording (in case you're wondering it just means a filename using wildcards, like `*.BAK`).

There is no equivalent of LocoScript's templates, although you can simulate them with a bit of trickery. You can make up a number of different files which hold your standard Protext commands to set up the margins and page dimensions for your paper, and merge them with your text to control the printing format – admittedly not too painful a solution.

But the problems are more apparent when it comes to actually printing something out. It is not difficult to get something printed out in draft form, but if you are the sort of person who likes to use exotic character spacings and margin styles it can take a few tries and a few yards of wasted paper. To make it worse it is not obvious at first how to abort printing when things go wrong – you can do it with a simple [PTR] reset but this doesn't seem to be mentioned in the manual.

There is a handy command `PS` which allows you to preview on the screen how the the pages will look when they will be printed but even this doesn't pick up the quirks of the enlarged text embedded print command which can cause havoc. Trying to centre a line of enlarged text causes all sorts of strange effects, usually ending up with the printed result spread over several lines.

It is not that you can't do most of the fancy effects with headers and footers but it does seem a bit less obvious than LocoScript. There are also more serious problems like proportional printing causing total confusion to the page unless you switch off the Justify Right command which justifies the text to both margins. None of these problems are fatal but they can be annoying.

Verdict

For anyone really involved in bulk text processing, Pocket Protext is just as powerful as the full Protext and at a very attractive price. The missing spell checker and mail merger are nice in the full Protext, but most people will be glad of the option of saving £40. It's a very welcome and well-pitched addition to the PCW word processing market.

Pocket Protext is well worth the investment although it does take time to learn to use to its full capacity. It is also true that most of the bugs that plagued PCW Protext in its early days are well and truly eradicated. If you need to use complex text printing commands, you may find Protext a little frustrating at times.

What's missing?

Just in case you've read reviews of the full Protext and you want to check whether a specific feature is in the Pocket version, here is what Pocket Protext doesn't have (owners of the full Protext can sit back and feel smug here):

The mail merge and spell checker have been omitted. You can buy ProSpell for £29.95 which is of course tailor made for Protext. Another major absence is the calculator – you might not think of buying a word-processor to get a calculator but it is surprising how often you tot up little sums and transfer the results to a letter if you can.

Box Mode, the fancy feature that allows you to print out in two columns, is missing, as is the Typewriter feature which corresponds to the Direct Printing of LocoScript (so handy for envelopes).

Background Printing has gone, which allowed you to carry on editing while a long document was printing. In practice, since the printer has a buffer which can easily hold normal sized documents there seems to be little time wasted waiting for the document to print.

It does appear that you can use the EXEC files feature – files which can be read as though they were keyboard inputs like SUBMIT files in CP/M – although this does not appear to be documented in the manual.

Should you discover that after buying Pocket Protext you can't live without these fancy features you can upgrade to full PCW Protext for a mere £50.

Moving fast

The delete and undelete commands give you a very snappy way of moving or duplicating lines of text. To move a line, delete it then move the cursor to the destination, and use the undelete command. You could press undelete ten more times and get ten more copies of the line.

PLUSES

- Faster than its competitors in virtually every department
- File and disc handling commands make you forget trying to grapple with CP/M
- Simulates a lot of the key strokes of other word processors
- A lot of delightful little touches

MINUSES

- Has to be learnt thoroughly to get full benefit, which isn't made easier by an unfriendly manual
- Some quirks in the printing stage that are annoying
- No spell checker or mail merger (but that's why it is cheap!)

RANGE OF FEATURES	■■■■■	PERFORMANCE	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■

8000 PLUS VALUE VERDICT ■■■■■

The Cracker-2

Using the wrong spreadsheet can seriously damage your prospects....

"*CRIKEY* Margaret! We'll have to put income tax up to £1.10 in the pound....."

"...Nonsense Nigel, with *Cracker's* Goal Seeking DO WHILE facility, I've worked out we could balance the budget if we raised the duty on ciggies to £87 a packet instead...or maybe raised the cost of petrol to £4 a gallon, or..."

It looks as if the Chancellor has been using the wrong Spreadsheet.

You need look no further than Essex for the Home Grown PCW spreadsheet with nearly as many facilities squeezed into an 8 bit edition as available with its 16 bit big brother. Look around the market and ask yourselves these questions before you take the first box on the dealer's shelf....

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5. Which has built-in date calculation, timer and I/O commands?
6. Which has ASCII, DIF and dBase™ file compatibility built-in?
7. Which one even has a simple database and mailing label print option?
8. Which one has built-in *high resolution* screen and printer graphics?
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DIGITA INTERNATIONAL

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Can be used for: • Mailing Lists • Personal Records • School Reports • Plant Records • Order Forms • Statistics • Membership Records • Customer Records • Telephone Directory • Job Cards • Catalogues • Stock Control

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"...more fun than filling out your tax return....well worth the investment."
8000 Plus, April 1987.

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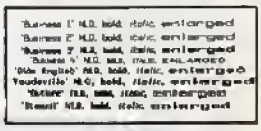
The only reasonable criticism of the Amstrad PCW might be the standard of the printed output. SUPERTYPE will offer you 8 new, radically different typefaces. Unlike other printer utilities, SUPERTYPE will work DIRECTLY with LocoScript/LocoMail/ LocoSpell and all of your CP/M software. So if you want your printed output to look a bit different from all the other LocoScribed letters around, use SUPERTYPE.

"...readable, useful, interesting and a valuable addition to the PCW's talents....very simple to use....learnt in 15 minutes....it's font-astic!"
8000 Plus, December 1986.



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- The day of the month, eg, 23rd of June
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- Cheque or reference number, eg ABC123
- Class code, one of up to 50 defined by you to suit your circumstances eg o1= Overheads, o1= Rent, o2= Heat/Lighting, o2= Stationery etc. or m0= Motoring, m1= Petrol, m2= Road Tax, m3= Maintenance etc.
- Descriptive text eg, "Tax Rebate", "Refrigerator", etc.
- Optional single-character mark as an extra identifier, eg, b= business, p= private, etc.
- Account reconciliation marker.
- The amount of the transaction, debit or credit.
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VISA

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The double-sided disc contains the three main programs, a selection of useful clip art, extra fonts and tutorial page.

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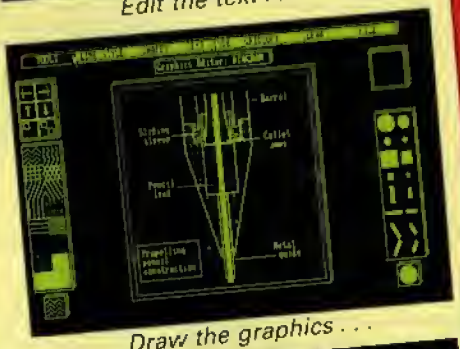
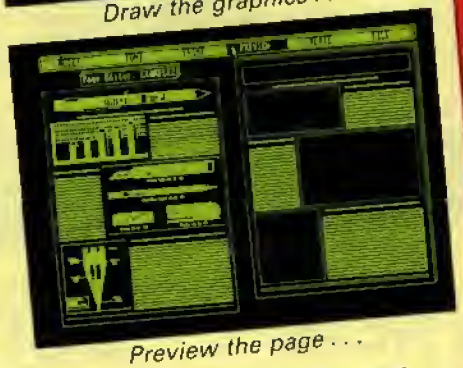
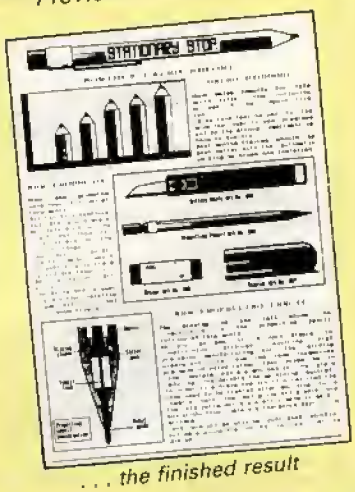


Draw the graphics . . .



Preview the page . . .



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A067

Text books on disc and banner display signs from your PCW in this month's miscellany

Tas-Sign

£29.95 ● Tasman Software ● 0532 438301

Remember that poignant moment when you discovered that the most impressive text you get from LocoScript is 10 pitch double space bold? For anyone mentally scarred by this discovery Tasman have come up with a natty little program to churn out signs with letters up to seven inches high.

The problem with any sign writing program is that to get decent results from the PCW's simple printer takes a long time. If you want to print something in reverse double strike double density meshed (best quality) in Tas-Sign you still are better going for a long walk rather than watch it print. On the other hand a single strike single density sign comes out comparatively quickly.

And Tas-Sign does give you plenty of choice. It allows up to five lines of text with a maximum of 32 characters in each. There are four different fonts to choose from, all specially designed for large signs, which print out impressively crisply.

If that's not enough the text can be reversed, underlined, centred or in one of eight different hatchings or patterns. And why not finish it off with a fancy border? If you mix too many styles in the same sign you can end up with a real pig's breakfast, but if you contain your natural exuberance the quality is quite impressive. The result can be printed out in Landscape form if you want, ie. sideways across page after page of continuous paper for really long signs.

Real perfectionists can start tinkering with the letter spacing options (proportional, fixed or kerning) or stretch or condense the characters to suit. In fact the main complication with the program seems to be the range of choices offered. But don't be put off if you only want it for a simple application – it's still fairly easy to pick up.

Small characters don't look very effective, and you can't go below about one inch high, although you can vary it arbitrarily up to about six and a half inches. There are still one or two problems to be sorted out with minor bugs. We found the letters X and N printing out damaged at over 200 dots high in the 'Casual' font, and the manual's pretty table of special characters (Yen signs and others) are not implemented for the PCW, but only on the PC.

RING the CHANGES

RANGE OF FEATURES ■■■■■ PERFORMANCE ■■■■■
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Viewbook

£15 ● Information Education Ltd ● 0782 281643

Have you ever realised you can use a PCW to read as well as write? That's the idea behind Information Education Ltd's list of 24 Viewbooks now available for the PCW.

These are computerised text books mainly for GCSE social science subjects, but the company are widening their range of subjects with discs for Primary School and CSE English. The idea with Viewbooks is to make traditional text book information more accessible by using all the technology of the PCW to find your way through swathes of text. You buy a book on a disc with on average 20,000 words split up into manageable pages.

Think of it as a large database already packed full of information. You get a menu of chapters with details of the subjects covered and each chapter is similarly split into sections. If you can't find the precise part of the text you want there is an Index (subjects in alphabetical order) or a List (subjects in page number order). Find the section you want and go straight to it with the 'Turn to Page' option.

Should you still not have found exactly what you want there is a search facility to look for a specific word. Say you are using the *Marx: An Introduction* disc and have decided to home in on Karl's brothers Groucho and Harpo; you can search the text for occurrences of the name.

Each page usually has three references, either to another part of the text or to the extensive bibliography. To follow these up just press the right number and you're there. Should you want to go back to follow up another line of enquiry a Retrace key-press takes you back a page at a time until you find the right place.

Once you've found the information you can then use it in a number of ways. You can take short notes to be printed out later. This is necessarily a very limited facility, using only the three lines of space at the bottom of the page so that you can copy details direct from the text.

More interesting is the ability to print out any number of pages or transfer a file with chosen pages to M-drive so that you can work on the text in a word-processor – in other words instant essays.

One slightly annoying feature is that bigger books are spread over two sides of the disc, so flipping back and forward can cause a constant successions of disc changes. But apart from that the main problem seems to be that you can't read it on the train. EXIT

Titles in the viewbook series include: 'Science in Society', 'Ethnic minorities', 'Punishing Poverty', 'Defence anf the Economy', 'Men's work, Women's work', 'Israel, Palestine and the USA', 'Health, Medicine and Society', 'Disappearing Forests', 'Atmospheric Pollution', 'The Factory Acts', 'Causes of World Poverty', 'Drugs', 'Television Communication', 'Keynes: An Introduction', 'The Hidden Economy', 'Youth Unemployment and Work', 'Cinema in View', 'Women's History', 'Race and Ethnic Relations', '19th Century Living', 'Marx: An Introduction' and 'Understanding Work'.

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DIY DATABASE

If you have flicked through the pages of this month's database review, wondering why you can't afford any of them, just remember there is an another possibility. Write your own – free, gratis and for nothing (apart from the time spent slaving over a hot PCW that is). And just think about the feeling of personal satisfaction you'll get when it's working.

Mallard BASIC may not have all the fancy graphics to write real zap-em-up Space Invader-type games but it does have Jetsam, a remarkably sophisticated and efficient file handling system.

The first thing you'll note about references to Jetsam is that they casually mention that it is not particularly simple to understand. It is true that the Amstrad BASIC manual does seem to treat the intricacies of Jetsam a little like the inner secrets of a clandestine religion – shrouded in a veil of obscurity and confusion.

As with all these mystical concepts it is easier seeing them in action than having them explained over the phone – so perhaps the best idea is to take a simple but practical example of Jetsam to see how it goes about things. The listing is for a club membership database that stores details and lists an index of entries. Although you can amend entries in Jetsam, this example just allows for deleting entries that need amending and re-entering the details.

This is by no means a full, exhaustive sample of what Jetsam can do, but it does show how you go about starting to use Jetsam and gives the theory that can be used to add on other features as you get more confident. This program is also not the sophisticated tool you might want for this particular purpose but we are sure all you clever 8000 Plus readers will be able to modify it to suit.

Let there be files...

The main thing you have to learn about Jetsam is its vocabulary (and that's not counting the swear words when it doesn't work). For a start you don't just OPEN files in Jetsam and find them miraculously there. You have to CREATE them.

Every time you start a database you have to create two files – an index file and a data file. The two file system is what gives it its speed and sophistication but it also can give you one or two headaches. For example you may find the information recorded on the two files gets out of step somewhere along the line.

This works fine as long as nothing goes wrong with the program. But if it crashes before the files are CLOSEd (as happens no more than three or four thousand times during an average program development) there might be information in one file and not the other. Now Jetsam, being extremely clever, knows when the two files are inconsistent and will not allow you to use the files while they are in this state. So it does prove handy to make sure the files are always closed at the end of a program.

But first to be creative. You only need to CREATE the files once for each disc you use it on. This program checks to see if the files are already created and only if there aren't it asks if you want to create them.

There are a couple of things to note in the command used to CREATE. It starts with a number called the 'file' number. The main thing to remember is that you have to quote this number more often than any other. You can't OPEN or CLOSE the file without quoting the file number (e.g. CLOSE 1). Virtually every major Jetsam command will expect the file number.

You then enter the names you have chosen for the two files (in this case CLUB.IND and CLUB.DAT) followed by the lock number, a kind of password vital in multi-user systems but quite unnecessary on the PCW. However it has to be there or it just won't work (the number recommended is 2). The next number is the one that needs some thought. It decides the total length of each entry so telling Jetsam where each new record begins. So when this figure is 70 as here it tells Jetsam that every 70 bytes there is a new record.

To work this out you have to decide the maximum size of each entry or field. You have to work out in advance the number of characters you need – say a maximum of 20 characters for a line of the address. You add up all the maximum numbers for each field and add two. The two extra bytes are important because this is where Jetsam keeps a note of where everything is. You cannot store any information in these bytes.

It may not be tragic if you miss this figure out as it will default to 128 bytes. The problem with this is that it could be too small for a complicated set-up or waste a lot of space for a small one.

```
0 REM ******Jetsam example******
10 MEMORY ,,,256
20 BUFFERS 10
30 IF FIND$("club.dat") <> "" THEN 80
40 INPUT "No data file - Create a new file? (y/n) ";y$
50 IF UPPER$(LEFT$ (y$,1)) <>"Y" THEN END
60 CREATE 1,"club.dat","club.ind",2,70
70 CLOSE 1
80 OPEN "K",1,"club.dat","club.ind",2,bf
90 FIELD 1,20 AS name$,20 AS add1$,15 AS add2$,11 AS tel$,2 AS fee$
100 PRINT "       A  -  ADD A MEMBER":PRINT
110 PRINT "       E  -  EXAMINE/DELETE MEMBER DETAILS":PRINT
120 PRINT "       I  -  INDEX OF NAMES":PRINT
130 PRINT "       X  -  EXIT":PRINT
140 PRINT:PRINT:
150 INPUT "ENTER OPTION - ";answer$ :answer$=UPPER$(answer$)
160 IF answer$ = "" THEN 210
170 answer = INSTR("AEIX",answer$):IF answer = 0 THEN 100
180 ON answer GOTO 1000,2000,3000,4000,
```

▲ Create your files and set things up

With a whirr of the disc drive your files are created and you immediately close them again remembering to quote the famous file number (CLOSE 1) just to open it again in the program proper.

Open says me

Unless you need to CREATE the files the first thing that normally happens is that your files are OPENed (line 80). ▶

Random Access Files

The SAM in JETSAM stands for 'sequential access to memory'(no we don't know what the JET stands for). Imagine a name and address book where the entries come in no particular order. Finding specific items would be tedious and time-consuming. But if you keep an alphabetical index of surnames at the back with page numbers and have one record to a page you could find things quickly. JETSAM works in a similar way and keeps an index of all the keys and record numbers (in this example the key would be the surname and the record number the page number) in a separate file to the data, and because all the entries in the data file are kept to the same length (one to a page) it knows where to find things.

```
1000 REM *****Input member's name*****
1010 PRINT:LINE INPUT "MEMBER'S NAME (Surname first) - ";n$
1020 IF n$ = "" THEN 1010
1030 LINE INPUT "ADDRESS 1          - ";a1$: IF a1$ = "" THEN 1030
1040 LINE INPUT "ADDRESS 2          - ";a2$: IF a2$ = "" THEN 1040
1050 LINE INPUT "TELEPHONE NO       - ";t$: IF t$ = "" THEN 1050
1060 LINE INPUT "FEES PAID          - ";f$: IF f$= "" THEN 1060
1070 LSET name$=n$: LSET add1$=a1$:LSET add2$ = a2$
1080 LSET tel$=t$:LSET fee$ = f$
1090 PRINT : PRINT "Entry is being added"
1100 result = ADDREC(1,2,1,name$)
1110 result = CONSOLIDATE (1)
1120 INPUT "Do you want to add another name";y$
1130 IF UPPER$(LEFT$ (y$,1))<> "Y" GOTO 100: ELSE 1010
```

▲The information goes in here.

This uses the letter "K" for keyed file and the famous file number.

The next line (90) sets the number and the maximum length of the fields. For instance the first field (the first section of the entry) is for the name of each club member and is allowed a maximum of 20 characters. Then there are two address lines (one with 20 and one 15 characters), a field for the telephone number (maximum 11 characters) and a 2 digit entry to take the amount of fees paid.

Of course you can have more fields or adjust the length by changing line 90 as long as you remember to amend the maximum number of characters (end of line 60) if that is required.

The information goes in here...

Line 1000 starts the actual businesses of putting information on disc. After inputting data in the usual way (lines 1020 to 1050) we LSET everything. All this does is set the actual characters at the left end of the field and fill out the remainder with spaces, so if you have a field with a maximum of 20 spaces and an entry ten characters long, it will be padded out to fit.

The key in this case is the entry in the NAME field so this appears in both the index and the data file. Although it is not done here, you can make other fields keys (with the use of ADDKEY) to make a really flexible database. For instance you could call up the entries that had paid a specific amount of fees.

The ADDREC command in line 1080 stands for Add Record and suitably enough is the only way of adding records. It is followed by the file number, the lock number and a new one – the rank number. Jetsam files can be divided into eight different sections (0 to 7) depending what number goes here. This is most useful when you have a number of keys.

Then CONSOLIDATE (with the file number) actually puts the information on disc and makes the two files consistent.

Serial files

The information in "serial files" is all stored in one permanent order and there's no way of systematically finding a particular item. LocoScript documents and other text documents are examples of serial files – you can't pick out one particular paragraph or change even a single word without going through the business of reading in the entire file to the working memory, making any changes required, and then re-recording the entire file over the old one.

▼ This section allows you to examine or delete entries

```
2000 REM *****examine/delete entries*******
2010 LINE INPUT "MEMBER'S NAME (Surname first) - ";seek$
2020 result = SEEKKEY(1,2,1,seek$)
2030 IF result=103 THEN error$="NAME NOT FOUND":GOTO 9000
2040 GET 1
2050 PRINT add1$
2060 PRINT add2$
2070 PRINT "Telephone no - ";tel$
2080 PRINT "Fees paid    £";fee$
2090 INPUT "Do you want to delete this file";y$
2100 IF UPPER$(LEFT$ (y$,1)) <> "Y" GOTO 100
2110 PRINT:PRINT "Record is being deleted"
2120 result = DELKEY(1,0)
2130 IF result > 103 THEN error$ = "DELETE FAILURE":GOTO 9000
2140 result = CONSOLIDATE (1)
2150 GOTO 2010
```

...and comes out here

We then have the slightly more complicated task of getting the information off the disc at some point. One problem with Jetsam is that it looks for an exact match for the key entry. Even an extra space will confuse it.

To help us we know that all the entries are in the index file in alphabetical order. If we can list them out we have all the keys exactly as they are in the file so we can easily pick out the right one.

It also helps that even if Jetsam doesn't get a perfect match it will usually go to the place that it thinks is nearest, which is very often the right place anyway.

First the list of entries. This is achieved through the command SEEKRANK in line 3020 which looks for the first entry in the index file. Here again you need the file number, after GET in 3030, the command which tells the computer to pick out the fields of the record you've just sought so that you can then print them out. Then all the rest of the entries are got in turn using the SEEKNEXT in line 3110. If you are confused by the "result =" business that is because each of these actions generates a number – you hope for 0 which signifies that everything has gone right. If something has gone wrong you can find out why by looking up, in the manual, the type of error corresponding to the number generated

▼ To list out the names.

```
3000 REM ****index of names*****
3010 line$ = SPACE$(70)
3020 s = 0
3030 result = SEEKRANK(1,0,0)
3040 GET 1
3050 s = s+1
3060 IF s= 1 THEN MID$(line$,3,20) = name$
3070 IF s= 2 THEN MID$(line$,28,20) = name$
3080 IF s= 3 THEN MID$(line$,53,20) = name$
3090 IF s = 3 THEN PRINT line$
3100 IF s = 3 THEN line$ = SPACE$(80)
3110 IF s = 3 THEN s = 0
3120 result = SEEKNEXT(1,2)
3130 IF result < 102 THEN 3040
3140 PRINT line$: PRINT
3150 PRINT TAB (18) "ENTER ANY KEY TO CONTINUE"
3160 IF INKEY$ = "" THEN 3160
3170 PRINT:GOTO 100
4000 REM ****Close file ******
4010 END
9000 PRINT TAB (18);error$
9020 PRINT TAB (18) "ENTER ANY KEY TO CONTINUE"
9030 IF INKEY$ = "" THEN 9030
9040 PRINT:GOTO 100
```

For instance the number to say that Jetsam has found nothing remotely like what you are looking for is 103. So by telling it to stop when result equals more than 102 you know when you have all the entries.

Now you have the list of keys you can find a specific entry with the command SEEKKEY in line 2010. You must input the name in exactly the same way as in the list. While the result number should really be 0 the number 105 is also interesting. This means that it hasn't found an exact match but has gone to what it considers the correct place in the disc. As Jetsam always wants an exact match this can be very useful. If you add in the commands SEEKNEXT and SEEKPREV you would be able to move back and forward in the entries.

You print out the relevant details with lines 2040 to 2080 and are then asked if you want to delete the file. Should you want to change any details at present you just delete the whole entry and type in new details under the 'ADD MEMBER' option.

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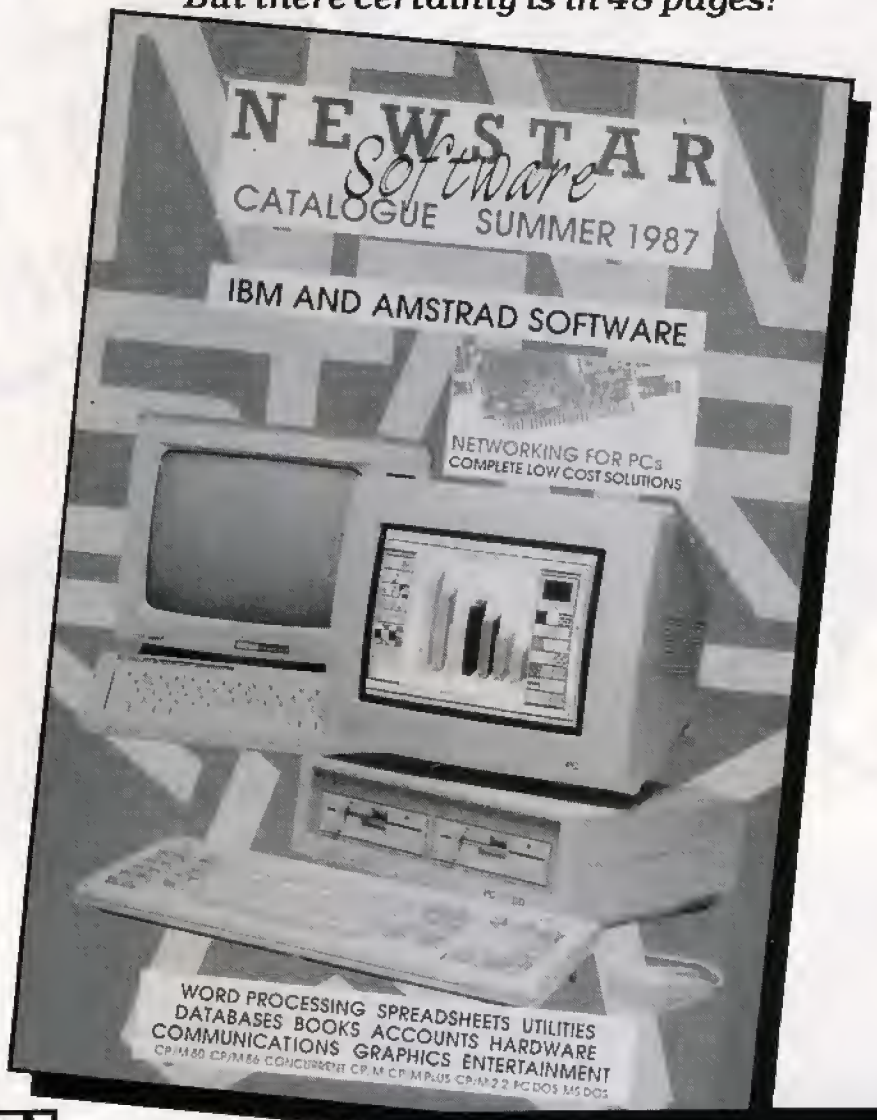

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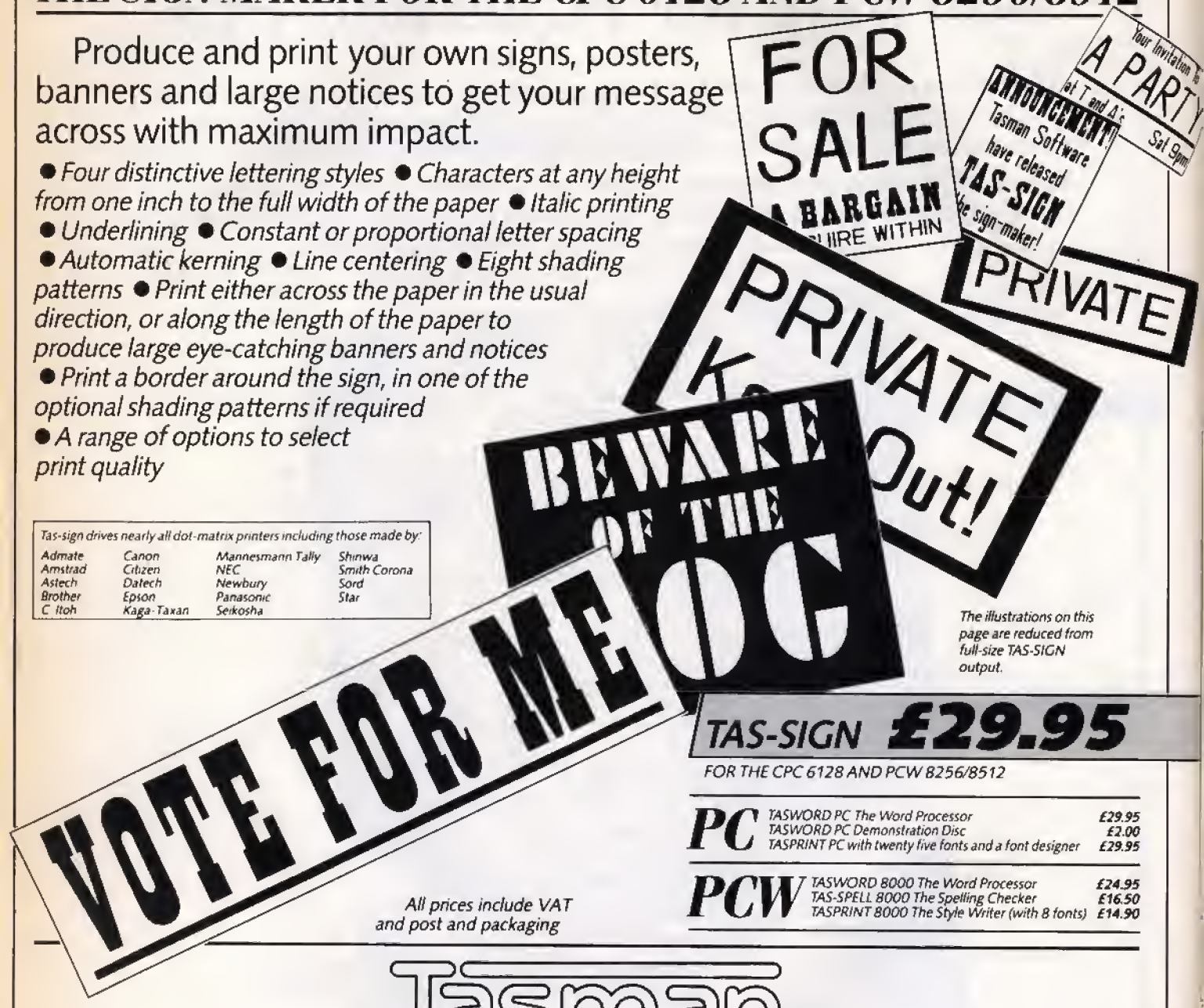

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PUTTING IT ON THE LINE

Buzz Rodwell reports his first impressions in the murky waters of modems, communications and phone bills.

Let's get one thing straight: I don't know a motherboard from a breadboard (and I always thought that was for slicing your Hovis on!), but my imagination is as fertile as anyone else's. Well, okay, maybe I'm just a bit weird.

Anyway, when I took charge of my brand new Miracle Technology WS4000 modem my mind trembled like an unset green jelly at the possibilities. I was caught between excitement and mounting trepidation - excitement because I'd seen the film 'War Games' (though I had no immediate plans to precipitate World War 3), and trepidation because, for someone who doesn't know one end of a transistor from the other all those cables and flashing lights can be a bit daunting. It had been a major conquest for me to successfully separate my PCW 8512 from its cardboard housing – if you're getting the picture of an electronic wimp, you're just about there.

Actually, getting to the launchpad proved remarkably painless. I attached a plug to the power pack supplied with the modem – a few tense minutes searching for a 3 amp fuse, pushed the ribbon connector into the back of the PCW (no serial interface box necessary for the PCW as Miracle have kindly built one into the modem, thus saving me quite a few quid), plugged the phone wire into the back of the modem and the modem lead into the little white box on my sitting-room wall and switched on. Nothing fused, nothing exploded, and the little red 'ON' light glowed obediently in the front of the modem. Phew!

Thought for the day

Perhaps this would be the best place to stop for a moment and explain why I've given my bank manager another coronary, and spent out a few of my hard-earned pennies on this intriguing little box of magic.

I am by profession (though that sounds a bit too grand – I don't want to give the Inland Revenue any expensive ideas!) a part-time writer/part-time genealogist: one job tends to supplement the other when temporarily waning. The character of the former occupation demands an up-to-date knowledge of current affairs and events, whilst the latter merely necessitates a working knowledge of everyone who's been baptised, married or buried in the last few hundred years. It's a man's life in the genealogy busines, you know.

As a consequence, I was aware of the fact that I needed ready access to suitable databases which might provide me with the facts and figures necessary to my research. Translated, of course, that meant that I just had to have another toy to play with. You know how it is. My wife does, anyway.

Of course, the most important thing a modem does is to cure your PCW of agoraphobia, because it literally opens up a world of communications: it provides you with the means of 'talking' to other computer users without the tedium of actually moving your lips, and permits you to read data otherwise only available from a newspaper or your local branch library, without leaving your keyboard. It's also a lot of fun.

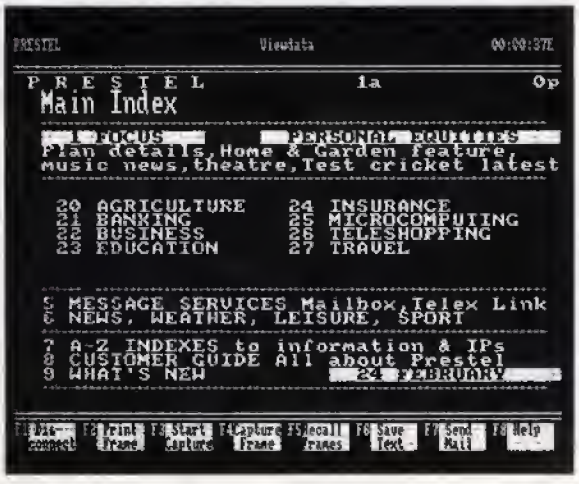
Dropping in for a Chit-Chat

My enforced reliance on the vagaries of the British postal service for all my connections with the big world was about to end. Quoting my Prestel password number at the girl behind the Co-Op checkout whenever I paid for my baked beans wasn't working too well.

With a shaking hand, I turned on my computer, inserted the CP/M disc (back-up copy, naturally), and then loaded Sagesoft's excellent communications software, Chit-Chat (made for a dodo like me). Unfortunately, the software provided free by Amstrad on the PCW – MAIL232 – can't cope with the way the Prestel 'viewdata' system displays its information. A couple of taps of the keys, and I had located the Prestel line within Chit-Chat's menu; one more tap and I

was able to sit back and watch as my modem rang the number for me (no more boring old turns of the dial). Some seconds later and the PCW's screen filled with the appropriate 'welcome' message. I was in!

I spent some weeks experimenting with Prestel, and have to admit that this particular service doesn't exactly set



▲ Prestel's welcoming screen ▶

Find out more

If you would like to read more about the world of communications, here are a couple of books of interest: *Using a Modem with your Computer* by Clive Gifford (Interface Publications, £7.95), and *Amstrad Communications for CPC & PCW Ranges* by James & Gee (Argus Books, £8.95). Any bookshop should be able to order you these if you tell them the title, author and publisher.

my adrenalin racing (at my time of life, possibly not a bad thing). It's fine if you happen to want to discover tomorrow's weather today, book a couple of seats in the West End, or buy lots of whatever it is you want lots of with your flexible friend, but for those of us whose credit cards have suffered one bend too many, it leaves something to be desired.

Even my meagre attempts at 'downloading' software from the computing pages met with tremendous frustration on discovering that most 'Amstrad' programs available were actually dedicated to the CPC range, a fact only realised after quite some time spent keying through long lists of juicy-sounding games and 'utilities'. Ho hum.

To be fair to Prestel, however, it does have a reasonably impressive number of facilities which allow you to 'tele-shop' to your heart's content, news services providing fairly cursory *resumes* of that day's events, special interest areas and, of course, 'chatlines' on which you can communicate with other Prestel users.

Ultimately, of course, you can only get out of such a system what's been put into it, and perhaps I shall have to wait for a while longer before my own specialised needs are sufficiently catered for.

Biting the bulletin

Meanwhile, with my wife subtly waving last quarter's phone bill under may nose (bang goes my plan to tap into the Australian pools results), I decided to turn my attention to the list of bulletin boards conveniently supplied by Miracle Technology.

For the uninitiated, a bulletin board (or 'BB' to jargon collectors) is an electronic version of one of those oblongs of cork upon which important, not-so-important and often trivial messages are deposited for others to digest. They are established and operated by a one-eyed half bull/half human being called a Sysop (a contraction of System Operator) , and are accessible via the Sysop's telephone line which is almost always engaged. Once you are 'online', however, they can open up a world of information which, to a writer, can be invaluable. Well, any old excuse to be allowed out to play.

So envisage for a moment a fairly straight, middle-aged bloke, hunched over his keyboard, desperately keen to establish contact with the outside world via electronic beeps down a telephone line (little things, you know!), who suddenly comes screen-to-screen with 'Ape-House', 'Boona Goona Island', 'Lost Trials Fido' and 'Mega-Anchovy': enough to send old Dan Archer completely ga-ga!

In fact, your average bulletin board is less like a sheet of cork and more akin to a computerised version of the old CB radio, with callers (often sporting such nom-de-BB's as Spike and Rocky) who have supplanted expressions like 'bear in the air' with ernest references to 'active messages', 'unsqueezing files' and, for some inexplicable reason, 'T-shirts' (you get a lot of chat about T-shirts, but maybe I had a sheltered upbringing).

With a modem linked into your PCW, you can chat in 'real time' with new friends, download (with some element of trial-and-error) information which you may then peruse at your leisure (providing the cat hasn't been sick over your printer, of course!), send telexes all over the planet, order a new printer (or replacement moggie), and even request a yet bigger overdraft when your next telephone bill comes crashing though the letterbox.

It goes without saying that this manner of communication points the way to the future, and it is easy to envisage a time when every home will have its own terminal and every child will know how many 'nulls' it has to offer. It is also undeniable that I am absolutely addicted to my WS4000, even if I haven't the faintest idea of how it actually works. I can see a time when my work as a genealogist will be enhanced through the use of data communication -- word has it that the enormous Mormon repositories of records in Salt Lake City will eventually go 'online'.

There is, of course, an inevitable process of education in using any new system (it's not too late for any of us!), and using Amstrad's own communications software, Mail232, requires some basic understanding of concepts such as baud rate, parity and 'hardware handshaking'. Luckily, Miracle Technology gives over a section of their modem's manual to explaining this facility.

If I have a beef, it's simply this: we're not all familiar with the technicalities and the terminology, and it would be nice if those who have computer science in their genes tried to smooth the way for us muddlers in a slightly more accessible and comprehensible manner.

Buzz words

The memory of my first BB access still raises a deep blush of embarrassment, during which time I was asked how many 'nulls' I had, what my 'terminal width' was and whether I was using a 'VT100 terminal'. I exited, from whatever 'Gandalf's Domain' that was, fast, squirming with the ignominy of ignorance. I just hope there is no record of my visit.

Things have relaxed a little since that initiation period, however, and I have advanced to the position where I can now quite blithely reveal my nulls (no, it's not illegal), expose my terminal width and drop 'VT100' into the conversation as though I really did understand what it meant. And although a large number of bulletin boards remain dedicated to the more technically-minded, I have discovered the ones whose areas of interest range from favourite films and best books to the philosophy of Zen Buddhism and the ethics of South African sanctions.

It still amuses me to find that fellow users continue to be called Spike and Rocky (are these the pseudonyms that the Sysop says you shouldn't use, or merely the same two wealthy and insomniac subscribers?), that a lot of people take their holidays in Antibes and that T-shirts are still a burning topic of conversation, but I am slowly beginning to feel more at home. Perhaps one day will summon sufficient courage to actually attempt a knowledgeable contribution to the more technical aspects of the chat.

Jolly jargon

Serial interface: the adaptor box you need to allow your PCW to talk to a modem. Amstrad's general purpose one costs £60 Miracle's special one comes built into their WS400 modem.
Downloading: the process of copying a file to your PCW from the system you are working on.
Online: being actively connected via a modem and phone line to somebody else.

▲ How a typical bulletin board greets you

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1 INTO 2 WILL GO

Just bought LocoScript 2? Thinking of buying? Ben Taylor explains how easy it is to convert your existing documents to the new order.

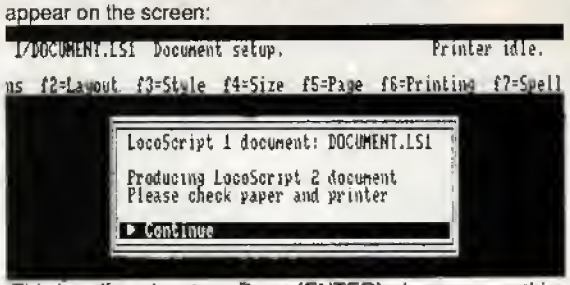
If you're a LocoScript user and you've just invested in the new version, LocoScript 2, the first thing you have to do is convert all your templates and working documents from the old LocoScript format into the new format. This is because improvements made to LocoScript in version 2 have made it necessary to alter the way text is stored in disc documents.

You don't really have to know how to do this conversion, since it is all done automatically when you try to use a document. However, if you know what is going on you might be less puzzled by a few oddities that ensue. Problems should arise only if you have documents with elaborate headers and footers set up on a peculiar page size.

LocoScript 2 will quite happily read documents created in LocoScript 1 (although the reverse is not true). All you have to do is start up your PCW with the LocoScript 2 start of day disc, and then put your old disc with all the LocoScript 1 documents into the disc drive. Use the 'Change Disc' command (now [f7], not [f1] of the Disc Management screen remember) and you will see your old disc contents listed out.

You can store LocoScript 2 and LocoScript 1 documents on the same disc so you don't need to buy any extra discs to keep new files on.

The three main things that you want to do from the Disc Management screen are to Create a new file, or to Edit or Print an existing one. LocoScript 2 has been designed so that you should be able to take old files and carry on using them without making any modifications. When you Edit a file created with LocoScript 1, you will see a message box appear on the screen:



This is self-explanatory. Press [ENTER] when you see this box, and LocoScript will convert the old document into the new format. This only happens the first time you open the file. After you have saved it, it is a kosher LocoScript 2 file, and won't need converting again.

After the processing is finished, you are left in the header and footer editing screen rather than the normal text editing screen. This is because – as is revealed later – LocoScript 2 treats headers and footers in a different way to LocoScript 1, and the conversion process may translate them incorrectly leaving you to make a few manual corrections. If you haven't got any headers or footers defined, it doesn't matter so just press [EXIT] and [ENTER]. Now you are in the familiar editing mode, and if you have no changes to the text you can exit to save the modified document.

In summary, to convert a LocoScript 1 document to LocoScript 2, just Edit it and save it again. You will need to do this before you can print the document, but copy, move, erase, rename and so on will all work on unconverted files.

You should convert all your TEMPLATE.STD files as the first thing, otherwise you will get the 'converting document' message whenever you create a new file

▶ The page size menu for a typical document in LocoScript 1, and the same file after conversion to LocoScript 2. The top and bottom gaps have to be 6 and 3 lines each, so the header zone in Loco 2 is 9 (you defined it in the Loco 1 file) minus 6 (the top gap), and the footer zone 7 minus 3. This leaves the page body the same.

Page sizes

One of the major changes that you will have to get to grips with is how LocoScript 2 attacks the problem of page sizes.

In the old days, back with LocoScript 1, you had to define how many lines per page there were, how many of those were for the header and footer, and where the header and footer text was to start within the allocated zones, for each template you used. Also, when you came to print the page out, you had to respecify all the page dimensions to the printer and tell it how many lines to leave between pages. All this added up to a large bottle of aspirin.

Experience has suggested to the program designers that all these options were confusing. What happens now is that

2 into 1

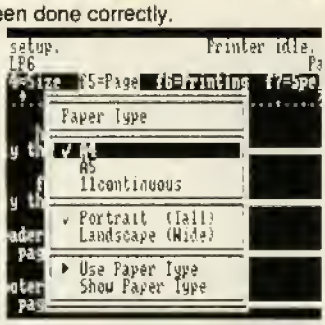
If you do need to read LocoScript 2 documents in LocoScript 1, perhaps to give a friend who doesn't have version 2 a copy of a document, there is a way. LocoScript 1 will just say 'Not a LocoScript document' if you try and edit the text directly, but the trick is to use ASCII files as a stepping stone.

On LocoScript 2's Disc Management screen, put the cursor bar over the file you want to transfer. Then on the 'Actions' ([f1]) menu choose 'Make ASCII file' and press [ENTER] and choose 'Simple text file' from the options that appear. You will be asked to choose a filename and group for the result.

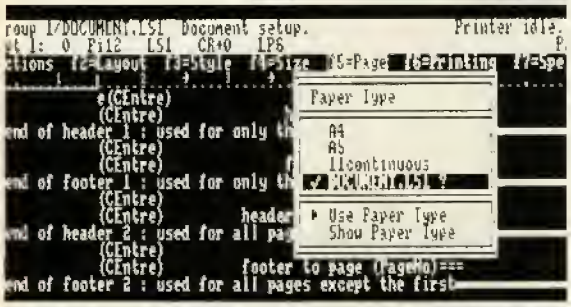
Now to convert this to the old format, start LocoScript 1 from your old start-of-day disc. Create a brand new document with nothing in it, and while editing it use the 'Insert Text' command (on the [f7] menu) to read in the ASCII file. Unfortunately all the emphasis codes, rulers, headers and footers will have been lost, so this method may be inconvenient for complex documents.

you set up in advance a variety of 'paper types'. A4, A5 and 11" continuous paper come predefined with LocoScript, but if you regularly use labels which take exactly 17 lines each you can define your own 'label' type. All this is done from the [f6] 'Settings' menu on the Disc Manager screen.

The upshot of all this is that when you convert a document from LocoScript 1 to LocoScript 2, the page setup menus may look strange. LocoScript will do its level best to work out what paper to use in its new system, and if you were originally using normal sizes like A4 or 11" you should find the conversion has been done correctly.



▶ The paper menu after converting two different documents. If the Loco 1 document had a standard size, a standard paper size is chosen (like A4), otherwise a special one named after the document is created.



From the header and footer text screen press [f5] 'Page' key and you will see the menu controlling the page structure drop down. Choose the 'Paper Types' option and you will see that one paper type has been ticked. If you are on A4 length paper, you'll be on the 'A4' type. If you're on some hybrid page size for your personal goatskin parchment stationery then you will see a paper type corresponding to the document name, meaning that LocoScript 2 couldn't match the LocoScript 1 page dimensions into one of its standard sizes so it has created a custom size.

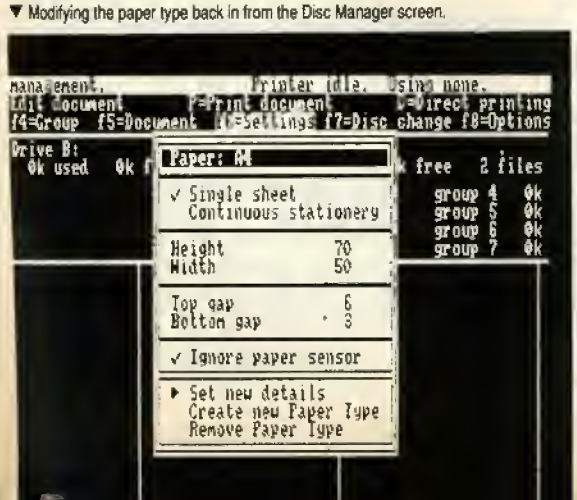
Get back to the previous menu, and go into the 'Page Layout' option. This is the new version of that old menu where you sorted out the page lengths. Now, however, because you have chosen the paper type and it is this which determines the page length you will find that you cannot alter the page length, top gap or bottom gap on the page. They are shown for information only. You can alter how much space to leave for the header and footer zones.

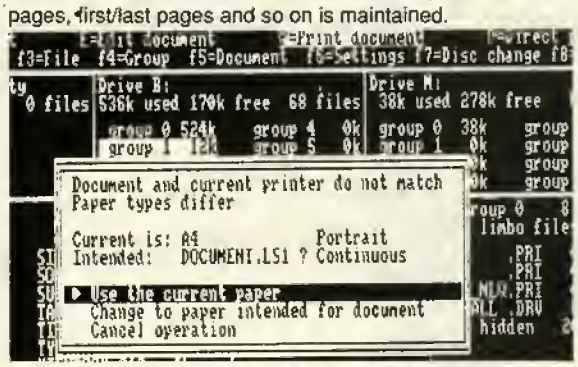
This is the major area where you will find a LocoScript 1 document may not be properly converted. The problem is that the concept of 'header position' and 'footer position' has been abolished. In the old version of LocoScript you defined a header zone (maybe 4 lines), some header text and a 'header position'. The idea was that you might not want the text to actually go on the first line of the header zone, so if you said that the header position was 3 then LocoScript would print the header text on line 3 of the page, leaving the top two blank.

LocoScript 2, on the other hand, assumes that the header text always starts on the first line of the header zone – if you want to leave some blank lines you have to physically put blank lines into the header text itself, say by pressing [RETURN] twice before the text begins.

As a result, if you used the header and footer positions to leave gaps on your page in LocoScript 1, the gaps will come out wrong in LocoScript 2. The two menus show below are the before and after stages in the conversion process. To make the printed results match, you will have to insert one blank line at the start of the header text, and two at the start of the footer text. Other than that, all the setup for even/odd pages, first/last pages and so on is maintained.

▼ Modifying the paper type back in from the Disc Manager screen.





▲ If your document's paper type doesn't match what the printer expects, don't worry – you will be given a choice.

And you're off ...

That's about it really. After LocoScript 2 has finished converting your file you may need to tweek the headers and footers a little as described but if you intend to carry on using the standard PCW printer there is nothing else to do. You can carry on editing normally. There are of course many differences in the way the two versions of LocoScript work which you will have many months of pleasure in discovering – in particular the way you define and change layouts has been altered, but the conversion process safely takes care of all that. Have fun!

EXIT

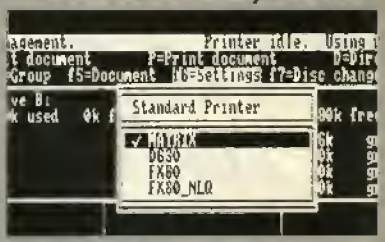
Printers

If you've just splashed out several thousand pounds on a laser printer to use with LocoScript 2 – or even a couple of hundred on a humble daisywheel – you'll want to know the quickest way to get a file printed out to it rather than the standard dot matrix printer.

Look at the files on your LocoScript 2 start of day disc: you will see four files called D630.PRI, FX80.PRI, FX80_NLQ.PRI and INSTALL.DRV. When you start up normally, the only printer that the PCW knows about is the standard one. The first thing to do is to decide whether your printer is an 'Epson FX80' printer or a 'D630' printer. In general, all dot matrix printers are Epson types, and all daisywheels are D630s.

On your start of day disc, move INSTALL.DRV from their usual group to group 0 of side A. If you are using a daisywheel printer, move D630.PRI across. For dot matrix printers, move FX80.PRI and FX80_NLQ.PRI instead. Now restart LocoScript ([SHIFT]+[EXTRA]+[EXIT]) and because these new files are in group 0 it will realise you have a new printer hooked up.

You still have a couple of things to do. Use the [f6] 'Settings' menu from the Disc Manager screen and press [ENTER] on the 'Standard Printer' option. You will see a menu of all the printer types LocoScript knows about, and press [+] beside the one which you want to be your standard printer. You can still use the others – say for doing a dot matrix draft of a document before the final daisywheel version



– by changing the current printer setting on the [f5] 'Printer' menu of the printer menu line which you get to by pressing [PTR].

Finally, if a document is primarily intended for a certain printer you ought to go into its Document Setup mode (via the [f1] menu while editing it) and change the printer type with the [f6] 'Printer' menu. Setting it up right saves being asked extra questions as LocoScript sorts out what printer you really want.

Gaping holes

The 'top gap' and 'bottom gap' are the parts of the page you can't print on, simple because the printer physically can't grip the extremes of the paper. On single sheet paper you can't use the top six lines or the bottom three, but on continuous paper you can use the whole sheet and set the gaps to zero.

The right type

The industry standard dot matrix printer is called an Epson FX80, and the standard daisywheel is a Diablo 630. This is why LocoScript refers to printers other than the PCW printer as FX80 or D630 – you don't have to use the exact correct type, but only a printer which behaves in the standard way, as most do.

When Amstrad wanted to make a better PCW, they bought LocoScript 2

When you want to make your PCW better, you too can buy LocoScript 2†

Locomotive Software's LocoScript 2 will be supplied with the new PCW9512, but is available now for your PCW8256 or PCW8512.

LocoScript 2 costs just £19.95, including VAT and UK postage (†but of course, it won't turn your 8256/8512 into a 9512).

For full details of LocoScript 2 contact Locomotive Systems or your local dealer.

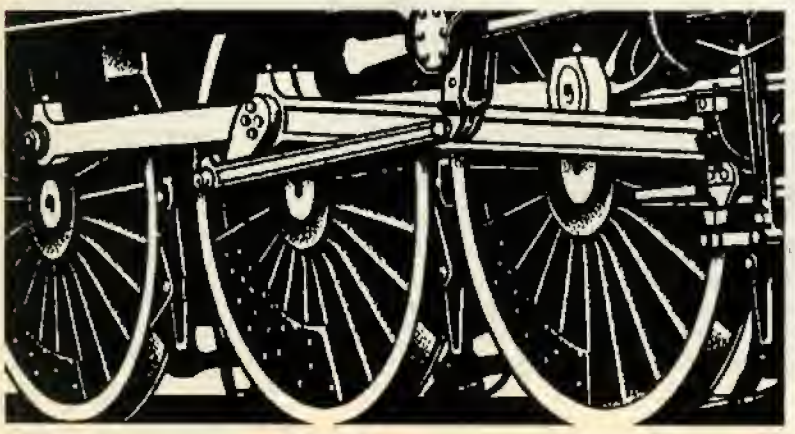
LocoScript 2 gives you

Quicker use
- –Fast movement around documents
- –Jump direct to a page
- –Save and continue from last position

Better Results
- –Choice of printers
- –Improved characters on the built-in printer
- –New characters (including modern Greek /Cyrillic)
- –Special scientific characters
- –Use accents with any character

Easier Operation
- –Multiple printed copies
- –Disc copying direct from LocoScript
- –New user guide with glossary and quick reference
- –Improved FIND and EXCHANGE

Compatibility
- –Familiar feel of LocoScript menus
- –Use existing LocoScript documents
- –Free upgrade of LocoMail and LocoSpell at the time of purchase



LocoScript 2 from LOCOMOTIVE SYSTEMS

Allen Court, Dorking, Surrey, RH4 1YL
(0306) 887902

BOOK LOOK

ADVANCED LOCOSCRIPT ON THE AMSTRAD PCW COMPUTERS
Ian Sinclair ● Glentop ● £8.50

The Ian Sinclair bandwagon rolls on. This jolly little pot-pourri is aimed at Loco users who have graduated from the manual and want to explore the world of text files, external drives, mailmerging, spellchecking and 'advanced LocoScript'.

PCW owners must be fed up of reading and hearing the mantra-like phrase *this does not work with LocoScript 2.* The book only goes as far as version 1.4, but most of the content applies to Loco 2 as well, given the few key changes between the two changes. Simple enough, but changing keys can be a tedious business, as any music copyist will tell you.

There are three chapters devoted to LocoMail and LocoSpell. While a whole chapter on LocoSpell makes rather heavy work of a quite simple package, a straightforward description on the mailmerger is quite welcome in view of the manual's turgidity, and this section is nicely done with some amusing examples.

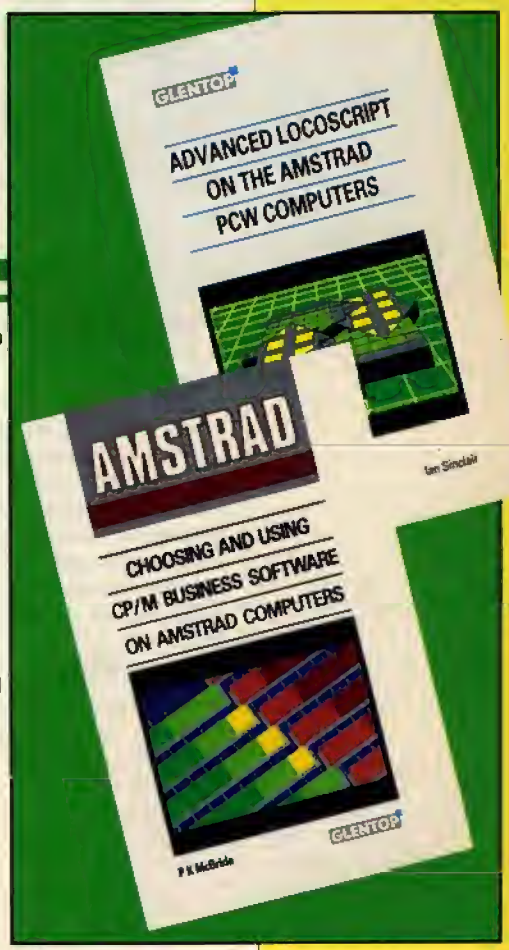
Chapter 3 describes hooking up to other machines and the use of other printers (daisywheels, for example) in fairly rigorous detail, from the physical setting up and connecting of the parts to the organisation of the text files onto the final printed page via CP/M. (The new LocoScript, of course, dispenses with all this Heath Robinson business and prints direct to a daisywheel if required, so this chapter is mostly irrelevant to the new version).

Potentially the most important chapter is the first, on text files, describing how your machines can enjoy intercourse with other wordprocessors via electronic mail; there's also a bit on fitting 5¼" drives. Good stuff, but brief – it would have been nice to see a more substantial treatment of all this.

Apart from that, there's a collection of odds and sods about layouts, cutting, pasting, and coping with the trauma of full discs; clearly presented and all good pot-boiling stuff, but surely old hat by now. Reading yet another essay on the pitfalls of Find and Exchange has all the excitement of hearing people in pubs reciting the Monty Python parrot sketch.

Advanced LocoScript on the Amstrad PCW Computers
ISBN 1-85181-160-5
8000 PLUS VALUE VERDICT ■■□□□

In fact the book doesn't really tell you anything you couldn't readily find out by leafing through one of the various excellent magazines for PCW owners now on the market (or even one of the awful ones). The kind of person who would get much out of *Advanced LocoScript* will have bought LocoScript 2, so it's a rather badly timed publication. At £8.50, it's really for Ian Sinclair completists only.



CHOOSING AND USING CP/M BUSINESS SOFTWARE ON AMSTRAD COMPUTERS
P K McBride ● Glentop ● £8.95

Businessmen, if you believe what you read, always sound in bad shape – hard-headed, thick-skinned, and far-sighted. Given these cautious attributes, you wouldn't expect a businessman to waste anything on irrelevant software unless the investment in terms of time and money were sure to be repaid in improved efficiency, ie. greater profitability. Of course computers are a Good Thing, but the software world, especially the business software world, is pretty daunting for non-cognoscenti; the adverts are crammed with thousands of packages which all promise to revolutionise your business, and enthusiastic magazines and devout converts to computing talk blithely of SuperCalc and Cardbox and Sagesoft as if they were household names.

The aim of this book is to introduce to the businessman considering the computerisation of his paperwork the basic types of software, their place in the office, and give a guide to the best known packages in each section. And, in that respect, it succeeds pretty well.

The only assumption made is that you own an Amstrad; from this starting point the opening chapters outline in general terms how computers fit into the organisation of office work, and outline the principles behind databases, spreadsheets, payrolls, graphics and accounts packages, etc. The emphasis is very much on business, too: the approach is oriented towards working efficiency and not pure gee-whizz technology.

There are chapters devoted to brief descriptions of the best-known packages in each area, plus Small Business Software and training materials (typing tutors and so on); there are also short guides to some of the less classifiable utilities like Brainstorm and Write Hand Man, plus sections on word-processing, and the essentials of CP/M. They don't really constitute a "Which?" guide to business software, because the end-of-chapter summaries don't recommend in any detail suitable programs for this or that type of user, beyond a table of prices and backup services; in any case, there have been new packages, modifications to old packages, and price cuts since the book was published. If you want to know which particular database or which particular payroll to buy, you'd be better off buying a monthly Amstrad magazine.

However, as a round-up of all those famous names everyone keeps mentioning, it's just the job. Even if you don't decide to buy SuperCalc or Cardbox or Typing Tutor themselves, by knowing a bit about the standard packages and the yardsticks against which performances are measured, you would be in a much better position to evaluate the more recent software.

For anyone who wants a general grounding in business software and requires initiation into the mysteries and wonders of the paperless office and how to achieve it, this book will be well worth the money.

EXIT

Choosing and Using CP M Business Software on Amstrad Computers
ISBN 1-85181-052-8
8000 PLUS VALUE VERDICT ■■■■□

NOVEL IDEAS

Lisa Eveleigh has some sound advice for budding authors culled from her experience as a literary agent.

Everybody has at least one novel inside them, so the saying goes - with the advent of word processors in general and the PCW in particular many people are having a go at bringing that novel out. Writing a book is an exciting prospect, particularly if it is to be your first, but if you don't get the basic approach right you could be in for frustration and heartache.

It seemed only fair to write this article on a word processor, so having created, named and entered a file I am imagining myself as a writer of fiction. Unfortunately it is all too easy to do just that, because we've all seen Hollywood's version of the Writer at Work. A romantically undernourished individual is struggling in isolation with his craft. The props are an ancient and venerable typewriter or fountain pen. An overflowing ashtray and waste-paper basket speak volumes. After days and nights of torment, our hero delivers his manuscript, gets the girl and wins the Nobel prize for literature. It's a common fantasy and a compelling one because it does seem within the bounds of possibility. You don't have to be young, fit or beautiful to do it and no teamwork is required. Writing is something you do by yourself, for which life itself is the only training.

Substituting a screen for the traditional blank sheet of paper hasn't made much difference to the nitty gritty of writing. The new technology can of course make the painful process of editing less messy, but it can't write the book for you. One of the things that amazed me when I started to work in publishing was quite how many people can and do find from somewhere the sheer stamina, discipline and dedication to sit down and complete a novel, often whilst doing full-time jobs and bringing up families. They quite rightly feel an enormous sense of personal achievement and are depressed and sometimes infuriated when they receive a 'no'.

Undoubtedly some of the disappointment and frustration could be avoided if writers spent more time studying the market. Publishing is an industry like any other and financial considerations rank very high on an editor's list of priorities. Publishers have to cost books and have a very clear idea how many they will be able to sell before they can enter into a contract with an author, so it is logical to present them with something that they can see a market for. This doesn't mean that the only books which stand a hope in hell are by Jeffrey Archer, Judith Krantz or others in the teeth, tits and trinkets department. These books sell, and they make enough money for their publishers to be able to afford to back less blatantly commercial novels, therefore keeping the industry healthily diverse. But by careful study of bookshop shelves it is possible to see likely avenues for your particular talents and the publishers most likely to be receptive to your work. Writers often consistently approach the wrong publisher precisely because they haven't done this kind of homework, and finding no joy, may give up entirely.

It is also very important to *read*. This may seem to be stating the obvious, but unless you have acquainted yourself with the best of every kind of fiction you cannot hope to succeed; and it would be tragic to find that your idea has been brilliantly executed by A.N. Other. Careful reading can also teach you how to construct a plot and cope with time-jumps.

Secret agents

Alternatively writers may choose to use the services of a literary agent instead of approaching publishers themselves. You will find both agents and publishers listed alphabetically in "The Writers' and Artists' Yearbook", a copy of which will be in your local library. Published annually, this is an invaluable general reference book.

A good literary agent will know which publishers are looking for what kind of books and will have wide experience of the industry as a whole. Authors fortunate enough to be offered a contract and dealing with publishers for the first time frequently don't know whether terms they have been offered – advances, royalties, percentages of sub-rights – are reasonable or whether to ask for more. If an agent agrees to represent you, they will hope to place your book with the most suitable publisher for you, obtain a realistic advance, negotiate a fair contract and ensure that your advance and royalties are paid promptly and in full. Not surprisingly, writers are increasingly sending manuscripts directly to agents. So it is fair to say that for the unpublished writer, the same guidelines apply whether approaching an agent or publisher. Agents only charge a fee when they sell a book. Commissions vary, but members of the Association of Authors' Agents charge ten per cent, and twenty per cent in the case of foreign sales where they work in conjunction with local agents.

Wait a minute Mr. Postman

However proud you are of your lengthy printout, it will make the waiting less agonising if you resist the temptation to parcel it up and send it off in its entirety. How do you make the first approach? Publishers and agents much prefer to see a preliminary letter accompanied by a brief synopsis, which should say something about the style of the novel and give the plot.

This should be written with care, as it is possible to tell a good deal about the writer from such a letter; your aim should be to intrigue the readers and make them want to know more. Try to avoid saying that your prose style compares favourably with Hemingway's, that your mother thinks your book is great, or that since Conan Doyle didn't fully understand Sherlock Holmes you feel you must correct this by re-writing his works with more care and insight (I recently gagged over that one). It is only courteous to enclose a stamped addressed envelope, which also serves to prompt a speedy reply.

Writing non-fiction

For non-fiction writers or dramatists there are slightly different procedures. A publisher looking for a new book on a particular subject will initially approach known experts in the field who have recently had an article published in a journal, or have been discussing their work on television. If they are able and willing to write a book the publisher will then commission them to do so, and will make a contract on the basis that they will be paid usually one-third of their advance on signature of their contract, to cover their research expenses. The rest is paid on delivery and publication. But how do you interest a publisher in your idea if they haven't heard of you? The preliminary letter should accompany an outline of the book you have in mind, give the sources of the research material you hope to use, indicate how long you think it would take you to write, and show why you are particularly well-equipped to write the book.

Playwrights should send a preliminary letter to either the theatre of their choice – or to an agent – briefly outlining the themes of the play and enclosing a curriculum vitae. You may then be asked to send either the whole play or a section from it, and it is vitally important that you present this in the accepted form. One side only of A4 paper again, but names of characters should be typed in capital letters, and double space each speech from the previous one. Double space the stage directions from the dialogue but single space the lines of the stage directions themselves.

If you letter has been successful and you have found a receptive publisher or agent they will then ask to see either some sample chapters or the whole book. Writers frequently don't believe that you can appreciate the scope of their novel from the first three chapters and are a trifle testy if asked to send these. In my experience this is a good system, because if the writing doesn't hook you in the first few chapters then it isn't going to, so it's better to tell the writers that as quickly as possible, thus saving them the grim business of watching every post. You should present all your work on A4, typed on one side of the paper only and double spaced. Never ever send your only copy out – it might get lost in the post.

Don't call us ...

Getting a positive response to your chapters doesn't mean that a decision to publish has been made – it's simply an indication of interest. At this point some writers feel inspired to dedicate their books to their friends, get their manuscripts bound and provide a paragraph entitled "About the Author", which is rather premature and tends to make the recipients giggle. It's also not a good idea to keep phoning to ask whether the book has been read unless you really have been kept waiting months and months, in which case the publisher is at fault. If it's only a matter of weeks such phone calls will not endear you to the readers who are quite likely to have a large number of manuscripts facing them. As reputable agents and publishers do not charge reading fees they are giving you their professional opinion for nothing – and this is another reason why return postage is considered so helpful. Good agents and publishers are very busy and since the publishable output from unsolicited manuscripts is tiny – only about 0.2 per cent of all books written are published – the time and expense involved in reading them far outweigh the results.

Rejection letters vary; they can be heartbreakingly brief, encouragingly brief, or they can offer constructive criticism and suggestions for revision. Agents and publishers will only do this if they feel that the author shows some promise, when they might ask to see the next book. However any form of rejection is anathema to the aspiring author because of the very nature of writing, which is an activity intrinsically bound up with the ego – reject the fruit of my labours and you are rejecting me. This is well understood by professionals who deal with established writers every day, so writing back by return of post suggesting that the reader has not fully understood your work gains nothing. However, publishers and agents are always impressed by a sensitive and thoughtful response to their comments – and it can encourage them to ask to see more.

If on the other hand the publishers feel strongly enthusiastic about your book, that it will complement the rest of their list and sell reasonably well they will make you an offer. Should revisions prove necessary you will work with an editor. If you have sent your manuscript to an agent, and after meeting and talking they have agreed to represent you, they will send the book to publishers on your behalf unless it is felt that the book needs more work, when they will advise on this as generally agents prefer to send books in as finished a form as possible. The reputation of literary agents stands or falls on the writers they represent, so they have to be very good indeed. Publishers trust a good agent's judgement and will give priority to the manuscripts that they send and take less time to consider them.

Favourite subjects

The impetus to write varies from individual to individual, but it seems that a large number of people naturally start to write about themselves. Of course it's sensible to write about what you know, but autobiographical novels have to be very very unusual indeed to find a publisher. Similarly, the only straight biographies which tend to find their way into the bookshops are those of the famous – or infamous. This is particularly heartrending at the moment because many of the young men who fought in World War II have now reached retirement age and at last have the time to draw on their war diaries and write their memoirs. There will undoubtedly be a demand for these first-person accounts in years to come, but at the moment it's the General's reminiscences that the publisher will buy, not Tommy Atkins'.

Generally speaking, since first novels do not make a profit, the publisher sees money spent on them as an investment for the future and hopes to build up a good relationship and publish the author's work for many years. For that reason, it is very difficult to place a novel by older writers. There are notable exceptions like Lena Kennedy, whose first novel was published when she was 67. However, she had been scribbling away for years, had lots of novels to hand and was such a lively character that she was extremely promotable – and immensely successful.

So what are publishers and agents looking for? Well-written books of all kinds, has to be the answer. In fiction, style, tone and language has to be inextricably linked to the subject matter so that the book just flows along, involving you completely with the characters and the world that has been created. If you can make the reader think 'I've felt that' or 'yes, that's exactly how newly-cut grass smells' you are succeeding. The books that send a tingle down one's spine frequently seem to have the age-old themes of innocence and love lost or gained, families dividing or uniting running through them whether or not these things are central to the plot. This must be because at bottom, we read to have our own experiences confirmed and articulated. So whilst you do have to 'look into your heart and write' you also have to observe and think and – above all – read and learn from the work of other writers if you want to be a published writer yourself.

Untold riches?

What can you expect if you succeed in making it into print? Well, unless you write a string of bestsellers the financial rewards are likely to be pretty modest. The majority of published writers earn under the national average income from their writing. Literary writers are getting higher advances now, but these are still confined to the Booker prize-winners and finalists. Oh dear – no money in it either – it does all sound rather prosaic, and these publishers and agents seem exacting individuals, don't they? But no-one who works with writers can remain impervious to the elation of an author whose talent has found recognition. The publication of first novels – which Martin Amis recently called 'The Holy Grails' of our industry – generates tremendous excitement which the publishing folk who work with their authors share and enjoy – so in that way maybe it is like the movies after all.

● *Lisa Eveleigh looks after unsolicited manuscripts at A P Watt Ltd. which is the oldest literary agency in the world. Founded in 1875 it has represented a very large number of the most distinguished authors of the past century as well as a great many successful contemporary authors.*

HAPPY BIRTHDAY TO US!

A nostalgic look at the 8000 Plus of years gone by

It doesn't feel like a year since 8000 Plus first took the Amstrad magazine market by storm, but maybe that's because it's really only been eleven months. Issue 12 marks the end of our first year of publication, and it has certainly been an eventful one for us and for the large number of Amstrad users. Indulge us for a page while we reminisce.

8000 Plus was conceived in March 1986. Future Publishing, founded in mid-1985 by Chris Anderson, had grown from employing three people at Chris's house in Somerton, Somerset to a grand staff of nine at Somerton's Old Barn nerve centre.

Future's only publication at the time was Amstrad Action, a magazine aimed primarily at Amstrad CPC games computers, but also covering PCW software to some extent. In the search for new staff for AA, Chris met Ben Taylor, who was working for electronics giant Plessey as an artificial intelligence programming researcher (sounds impressive, huh?).

Ben's interests lay with the PCW rather than CPC machines, which tied in with Future's plans to launch a PCW-specific magazine. So, on July 1st 1986 Ben started work as the staff writer for a yet-unnamed magazine for the Amstrad PCW, with Chris Anderson as the first editor. The launch data for issue 1 was set for the second week in September 1986.

The first task was to get a grasp of the full range of software available. To this end, we rang round all the PCW software companies unashamedly scrounging free copies of anything and everything – incidentally, we owe a big vote of thanks to all those companies who supported the then non-existent magazine by supplying us with valuable review copies.

I name this ship...

People still comment on the slightly strange name – 8000 Plus – but it seemed like a good idea at the time. The first title we wanted to use was 'Amstrad 8000', the rationale being that 8000 was the common factor between the two PCW model serial numbers, ie. 8256 and 8512. However, Amstrad wouldn't allow us to use their trade-mark name in the title unless it was 'in a purely descriptive capacity'. We didn't want to end up with a wordy title like 'Using the Amstrad PCW 8256/8512 for Pleasure and Profit'.

Next choice was 'PCW Plus'. Great. Snappy. No mention of Amstrad, but all PCW owners would recognise it. Unfortunately after sending out promotional material to the industry VNU Publications, publishers of the magazine Personal Computer World (PCW for short), objected to the title. They felt we were infringing *their* trade mark. Why they didn't object when Amstrad called their computer the PCW is a mystery. Incidentally, the potential confusion is apparent at the annual PCW show in September – which has nothing at all to do with the Amstrad computer.

So we settled on a hybrid, 8000 Plus. What happens now Amstrad have launched their PCW 9512 goodness only knows.

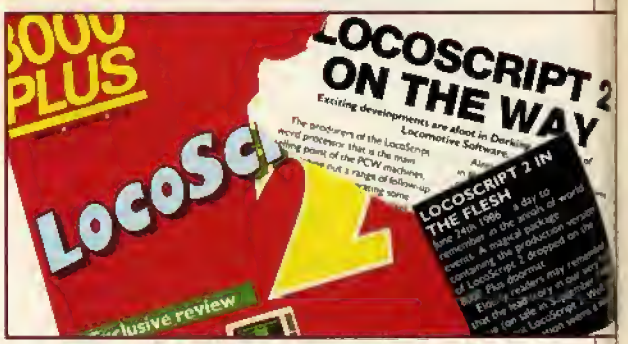
Ben then went about frantically compiling the first edition of the 'Good Software File', which involved reviewing around two programs a day for six weeks! Issue 1's File ran to seven pages which covered more or less all the software you could buy. The equivalent today would take up more than 15 pages.

Hold the middle page

As the first issue of 8000 Plus was being written, news of Amstrad's imminent launch of their 1512 IBM-PC clone leaked out. We decided to cover this in a separate magazine, rather than mix coverage of two quite different machines. However, the 1512 would be in short supply for a few months after launch, so there wouldn't be enough owners to support a fully independent magazine. Consequently the first two issues of 'PC Plus' were sold bound into 8000 Plus.

The first issue of PC Plus deserves a mention. Due on sale at the PCW show on September 3rd, Amstrad had called a press conference for September 2nd. As is customary, Amstrad would not confirm the existence of the 1512 nor give us an advance copy of their press pack for our print deadline. All but two pages of issue 1 of PC Plus had to be written by its long-suffering editor Matt Nicholson before the 1512 was officially announced!

For the last two, the news pages including the launch report, we brought the press pack down from London by motorbike courier and wrote them in a few hours on an Apple Macintosh desktop publishing system. Our printers agreed to print overnight, and we picked up the finished magazine the next morning, drove to the show and beat most of the daily papers with the launch news.



▲ The major software release of the year for most PCW owners was LocoScript 2. It made its first appearance back in the October 1986 issue, then again as a preview in May 1987, finally seeing the light of day last month, the August 1987 issue.

▲ 8000 Plus in the good old daysat the Old Barn – Alec Rae looking overexcited.

Cast thy staff

There have been a few changes in the 8000 Plus staff over the year. Editor Chris Anderson moved on to the higher tasks of managing director as Future Publishing expanded – we now employ over 30 people on five titles. Simon Williams (previously known to Amstrad Action readers as a freelance writer with the unlikely pseudonym of Bertram Carrot) took over as editor in December 1986.

In April we finally grew too large for dear old Somerton. After getting on for two years there, Future Publishing upped and offed to the great metropolis of Bath, to the financial detriment of Somerton's many pubs. At the same time, Simon defected to PC Plus, and in the absence of a better suggestion Ben Taylor took over as 8000 Plus editor.

New writers too are now familiar names on 8000. Alec Rae joined in February, and Rob Ainsley in June. Regular readers now know exactly what to expect from articles with their illustrious bylines.

Here's to twelve more happy issues!

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8000 PLUS INDEX

Do you remember that really useful Tip-Off you read? And now you just can't find it? Get it together with our grand index.

Students of the calendar will have spotted that issue 12 marks the end of our first year of publication, which seems like a good time to produce an Index. Every article, product review, and program listing printed since Issue 1 is given a mention, together with (of course) the ever-popular and invaluable Tip-Offs. The entries are in the form "#5, Feb 87, p10" meaning issue 5 (cover date February 1987) page 10.

A year is a long time in computing (as Harold Wilson would have said), so with the product reviews in particular be sure to check on price and availability. Products may have been dropped, and some companies have ceased trading.

We have limited stocks of back numbers from 7 onwards, available from *8000 Plus Back Issues, The Old Barn, Somerton, Somerset TA11 7PY* at £1.50 (nos. 7 and 8) and £1.75 (nos. 9, 10 and 11). Unfortunately issues 1 to 6 have already become collector's items.

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BATTLE ON THE C

Ben Taylor measures Arnor's new C compiler against the opposition

The PCW is not only a word processor but also a potentially powerful computer. Many people buy their PCW primarily for programming, but the speed and size limitations of the normal BASIC system for large programs may soon start to irritate you. The curiously named 'C' is one of the many alternative languages around for serious programmers.

ARNOR C
£49.95 ● Arnor ● 0733 239011

C is a programming language of increasing popularity, and many universities now teach it as their main language. The reasons for this are varied, and the emergence of a standard in any arena is rarely a logical one. One indisputable virtue of C in general is that it can produce code that runs fast.

Arnor C is a professionally produced package. For your money you get a text editor to prepare your programs with, and of course a C compiler. The text editor is a stripped down version of Protext, the widely admired CP/M word processor, and is efficient to use. Arnor have chosen to call this version 'Arnor Program Editor', or APED for short. No banana jokes please.

Being a 'compiler', as Arnor C is, means that it takes a file of program text and converts it into machine code for speed. The PCW's BASIC is an interpreter – it reads program text directly but cannot run it as fast as machine code.

To prepare a program, you first type it into the text editor. From APED's command mode you can then directly call the Arnor C compiler by typing `AC` which compiles and runs your program. It is an 'integrated' system meaning that if the compiler detects a program error on a certain line it will leave you in the editor at the correct point in the file for you to correct the mistake and try again until you get it right.

The manual runs to around 200 pages, roughly half and half between the text editor and the compiler. It is only a reference manual for experienced C programmers, and is written in a very formal style. There are a few example C programs on the disc, but you would need to buy a separate book to teach yourself the language if you didn't know it.

There are at least four C compilers available for the PCW, and at £49.95 Arnor's offering falls about mid-way in the price bracket. The market leader in microcomputer programming languages is Hisoft, and it is their version of C which Arnor's hopes to challenge.

Head to head

Both Hisoft and Arnor C are compilers, and both systems come with text editor. Both have manuals that are written for programmers and make no attempt at a C tutorial, but at least the Hisoft manual has examples with its definitions.

Hisoft C will compile a program into an ordinary CP/M '.COM' file, which means you can run it just by typing the program name from the A> prompt. In contrast, Arnor C produces an 'object code' file which must be run with the special command `RUNC program`. RUNC.COM, which you must have on your disc to be able to run a compiled C program, takes up 16k. Arnor do supply a MAKECOM program to allow you to make a true .COM file from their object files and the RUNC program, so if you wanted to sell C programs you had written you could do so without your buyers needing RUNC themselves. The resulting .COM file would be 16k larger than the object file, since it has effectively been merged with RUNC.COM.

We took two typical C programs and ran them under both systems. The first program calculated all prime numbers up to 1000 (by the Sieve of Eratosthenes, for all you computer science students out there). The second copied a 22k text file character by character filtering out certain unwanted codes. These two programs respectively test the arithmetic speed of the compiler and the disc file access efficiency.

While these results are on fairly small test programs and larger programs might not show up the differences as much, Hisoft C seems to compile in half the time, produce code that is half the size and runs twice as fast. Add to this the fact that Hisoft C costs £10 less and the only thing Arnor C has going for it is a superior program preparation editor.

Arnor C isn't a *bad* C compiler – it certainly does everything reliably and competently. It's just that Hisoft C is faster and cheaper.

C for yourself

There are plenty of good books around for you to teach yourself C programming if you want. One such is the imaginatively titled 'C for Beginners' by prolific author Ian Sinclair, £10.95, Melbourne House (phone 01-943 3911).

Arnor vs Hisoft

	Prime number test		Filtering a 22k file	
	Arnor C	Hisoft C	Arnor C	Hisoft C
Time to compile program	40 sec	6 sec	57 sec	30 sec
Size of compiled program	10k*	5k	10k*	7k
Time to run program	22 sec	6 sec	105 sec	42 sec

* Arnor C also requires a 16k support program (the 'run-time environment').

Hisoft C costs £39.95 and is available from Hisoft on 0525 718181

PLUSES

- Excellent integrated text editor (a mini-Protext)
- Well implemented on the PCW – provides extra C commands for screen control.
- Full version of C with extra maths library functions etc.

MINUSES

- Cumbersome to produce .COM files, needs a special run time support program
- Not as fast, or cheap as Hisoft C
- Manual makes no concessions to C newcomers. No tutorial, no index, no examples.

RANGE OF FEATURES ■■■■■ PERFORMANCE ■■□□□
EASE OF USE ■■■□□ DOCUMENTATION ■■□□□

8000 PLUS VALUE VERDICT ■■□□□

THE GOLDEN GATE TO BRIDGE

Alec Rae takes bids from two new Bridge-playing programs

COLOSSUS BRIDGE 4.0
£15.95 ● CDS Software Ltd ● 0302 21134

BRIDGE PLAYER 2000
£19.95 ● CP Software ● 0993 823463

One thing that can be said about Bridge is that it is almost as compulsive as a PCW. Put the two together and you have a diabolical combination that could mean the end of life as we know it. There have been two recent offerings for the Bridge player, Colossus Bridge 4.0 and Bridge Player 2000, both of which could easily keep a truly hooked Bridge player occupied for the rest of eternity.

As well as just playing the game, both manufacturers have seen the obvious advantages of using the computer as an effective teaching aid. Both versions give a 'tutorial' section and Colossus bundles a book 'Begin Bridge' with the disc. Mind you if it was possible to learn Bridge from a book you wouldn't need the program, would you? Bridge Player 2000 confines itself to a small 12 page booklet on how to run the program without attempting to teach you Bridge, which at the end of the day might be the most sensible way of dealing with it.

Both programs have a number of set hands that can be bid and played to show you the basics (10 in Colossus and 20 in Bridge Player 2000). These are played with the unusual convention that you can choose any bid or card you want as long as its the right one. If you get it wrong it bleeps

COLOSSUS CHESS 4.0

PLUSES
- Considerable flexibility in setting up hands.
- Advice on every play
- Includes Blackwood, Stayman and Baron conventions

MINUSES
- Documentation is a bit sparse and some features are not obvious.
- They won't allow you to take it into tournaments.

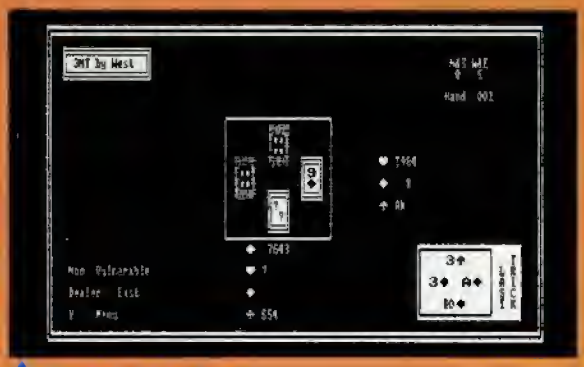
RANGE OF FEATURES	■■■■■	CHALLENGE	■■■■■
DOCUMENTATION	■■■■■	VALUE VERDICT	■■■■■

BRIDGE PLAYER 2000

PLUSES
- Larger and more simply explained tutorial. Easier for beginners.
- Includes Blackwood and Stayman conventions.

MINUSES
- Doesn't have the flexibility needed for the really serious player.

RANGE OF FEATURES	■■■■■	CHALLENGE	■■■■■
DOCUMENTATION	■■■■■	VALUE VERDICT	■■■■■



Colossus 4.0 showing its hand

at you as irritably as any real retired colonel and in true Pavlovian dog style you are soon playing like a grand master.

These hands also simulate the post mortem always held at the end of a hand with a short piece of text explaining the seemingly inexplicable behaviour of all the players in these set hands. These are pretty tame compared with the real thing of course.

"And now to play...."

Even when you enter the cut-throat world of competitive play both programs can still mollycoddle you. Bridge Player 2000 comes up with a menu that asks if you and your partner always want to get the best hands, some of the time or just at random. Would that the fates would give you such a choice when your playing for money. Colossus, being more aimed at the player with a bit of experience rather than the complete beginner allows you to choose the number of points that you want in your hand – a more flexible option.

This does more for you than just make you feel good when you always win. One problem with learning Bridge is that you so seldom get a hand that you can bid a slam on you can never remember any of the obscure formulae of the Blackwood convention when the time arises. What are the chances that you would be dealt half a dozen such hands in a row so that you can really get it into your head?

Both programs allow you to take a look back at the bidding during play and even allow you to peek at your opponents hands – don't get too used to it because it's not recommended in match play. Better still both programs allow you to abandon the hand at any time.

A word of advice

But the extra sophistication of the Colossus program now becomes apparent. The program gives an invaluable advice facility. You can get it to play the right card or you can ask its advice and then ignore it at any time. You can even backstep to play a trick again when you've made an utter mess of it (again, don't try it in match play) or use the Autoplay option that allows you to watch the experts at play.

Both programs allow you to rebid and/or replay the last game – a compulsive option that means that you can replay the same hand every way imaginable in the hope that you might make the contract some time. And of course both programs will score for you.

For the real enthusiast the ability to input complete sets of four hands in Colossus will prove a God-send. It does take a fair amount of time but if you can remember the hand you messed up at the Bridge club you can replay and rebid it until you get it right.Sounds like fun.

Bridge Player 2000's screen

ANNUAL BONDAGE

Tony Flanagan – narrowly passed over for the role of the new Bond – dons his dinner jacket for vengeance

THE LIVING DAYLIGHTS
£16.95 ● Domark ● 01-974 5624

There is a man that myths are made of, a man whose proud physique makes grown women fall to the ground in shameless adoration, whose savoir faire exceeds all known bounds, whose bon mots make Oscar Wilde seem like Sylvester Stallone. Of course, this man is none other than our esteemed editor, who, it just so happens, pays my wages.

Obsequious flattery aside for a moment, *The Living Daylights* has nothing whatsoever to do with editors. On the contrary, it's all about some jumped up secret agent (about as secret as MI5) who goes by the unlikely name of Bond... James Bond.

Straight from the film, the ageing hero has tottered into a computer game of the same name determined to knock the living daylights (oh what a wicked pun! Eat yer heart out Tarby!!!) out of the SAS, the KGB and just about any other set of initials that get in his way.

▲ Bond, James Bond. Ambushed in Gibraltar, and shooting it out at the Conservatory

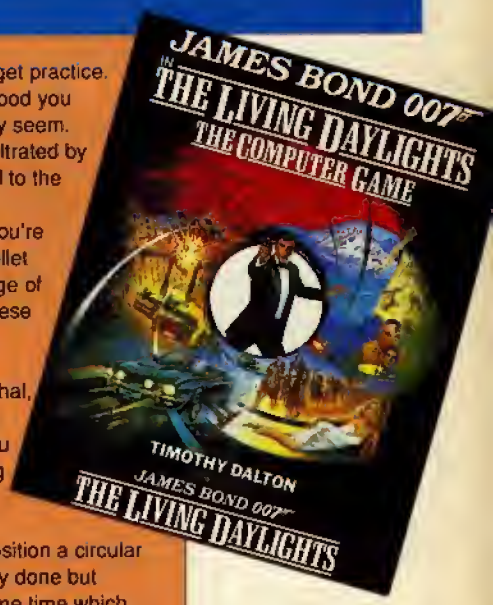
The game refers loosely to the film with each of the eight levels based on a particular location found in the cinematic version. Similarly, the game contains some of the main characters – Brad Whittaker, for example, who when not writing absurd almanacs reads military history books and sells bazookas to terrorists. There's also his accomplice Necros, master of disguise and part-time murderer, and General Koskov who speaks with forked tongue (well what can you expect from a commie rat?).

The aim of the game

Your task is to track down Brad Whittaker and blast him to bits. As it's only a game he probably won't mind, and as you're a member of Her Majesty's Secret Service, that makes it all right; after all, what's a little genocide between enemies.

The game contains neat graphics and realistic animation, with smooth scrolling from right to left as Bond jumps and ducks his way through successive levels. With five lives and an array of weapons available, JB has some chance of completing his mission but it's certainly not going to be easy.

On the face of it, the first level is no more than a training exercise. As Bond, you find yourself in Gibraltar, soaking up the warm Mediterranean sun. Suddenly you're ambushed by the SAS who are feeling short of a little target practice. When the so-called blanks start drawing blood you realise that not all the snipers are what they seem. The SAS, it transpires, have have been infiltrated by the enemy and are very keen to put an end to the apparently indestructible Bond.



The problem with the first level is that you're equipped with only one weapon, a puny pellet gun. On subsequent levels there are a range of weapons to choose from, five per level. These consist of bazookas, grenades, dynamite, mortars, and other crude instruments of destruction. More subtle, though just as lethal, are pens, cigarettes and ghetto-blasters. If you can't blast the enemy then perhaps you can bounce them a cheque, give them lung cancer or even play them a little Duran Duran.

Before you can hit a target you must position a circular firing sight in the desired spot. This is easily done but unfortunately Bond cannot move at the same time which makes him vulnerable to enemy fire. Throughout each level the screen displays your score and the number of lives you have left.

Culture clash

On the second level, Bond suffers a severe bout of culture and takes a trip to The Lenin People's Music Conservatory where no doubt the cloying Kara, a Czechoslovakian nymphoid, is playing her cello. Bond's task here is to be shot at from balconies and help the Russian delector, Koskov, escape from his KGB guards.

From here on you go through a succession of further stages, ruthlessly making witty asides and taking care not to crease your tuxedo. First to an industrial complex patrolled by grenade-dropping guards, next to an impressive mansion to protect Koskov. Out to get you is Necros who in fact is not disguised as a Greek island but as a milkman. However, not only do you have to avoid his molotov yoghurts but there's also an incontinent helicopter at the top of the screen sending down a steady stream of bombs. Finally, via Tangiers and Afghanistan, bloodied and exhausted you make it to Whittaker's hideout for the 'final confrontation' as the cliché goes.

The Living Daylights is not a bad game. Its main problem is that the tasks on each level are very similar, zap this zap that and so on. If that's all you want from a game then it might be worth it. Otherwise, think twice.

◀ JB out to get Necros at the fairground

PLUSES
- Some good graphic features (the helicopter, for example)
- A demanding game with plenty of action
- Clear objectives

MINUSES
- The action lacks variety
- Bond has to stand still when lining up his target – consequently he's a sitting duck

GRAPHICS	■■■■■	LASTING APPEAL	■■■■■
ADDICTIVENESS	■■■■■	VALUE VERDICT	■■■■■

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LANGFORD'S PRINTOUT

A page foolishly handed over to SF author DAVID LANGFORD who just happens to own an AMSTRAD

DIRTY WORDS

I started to write about computer jargon, but the words I was processing turned from green to blue when for no reason at all the disc in drive B started returning cheeky error messages. 'Track 1, sector 1 missing address mark, ho ho'... followed by that alarming choice 'Retry, Ignore or Cancel?'

Shrewd PCW users will deduce that I don't use LocoScript for these columns (because when I did, all my italic markers got lost as your editor converted to ASCII format for typesetting). LocoScript gives different messages and won't accept a duff disc: you can go into an endless cycle of 'Disc address mark missing', 'Disc data error' and – as the program lies through its teeth – 'Disc has been changed'.

Less sophisticated programs running under CP/M may actually be more helpful. What tends to go wonky is the beginning of the directory, and by patient pressing of I – 'Ignore the error and continue' – it was possible to skip the naff sectors and load my current column file, which fortunately came some way down the directory.

I optimistically typed R for Retry a couple of times first, in case the problem was just a shifting speck of dust on the drive head which might obligingly go away; I avoided C for Cancel since I *didn't* want to be thrown out of the program and back into CP/M....

Head smacking jargon

The day was saved, but PCW newcomers might well blench at the jargon needed to relate even this simple tale. In two paragraphs I've smacked the neophyte round the head with 'ASCII' and 'CP/M', and much more confusingly have used many English words which have taken on new, computerish meanings – address, directory, drive, file, head, sector, track.

Some people might even think they understand what's being said, yet be hugely or subtly wrong. (Wittgenstein wrote a lot about this and he didn't even have a computer – probably because LocoSpell would have complained bitterly about his title *Tractatus Logico-Philosophicus*.) At least we British can tell a computer *program* from a TV or theatre *programme*, though benighted Americans use the same word for both. I'm fond of distinguishing a computer disc similarly, by spelling it with a 'k', but Locomotive and your editor think otherwise (*see what he means? – Ed*).

New gobbledegook keeps emerging. IBM have just announced that their new mainframe operating system features over 2000 new acronyms for users to learn. Other jargon goes way back. Bootstraps are little leather flaps used to help you get a grip when pulling on boots. Lifting yourself by your own bootstraps is a proverbially difficult athletic feat.

Early computers, programmed by loading punched tape, faced an equally paradoxical problem – to read any tape required a tape interpreter program which, it seemed, would itself have to be loaded from tape.... The solution was called the 'bootstrap loader' program, which in early days would be 'toggled in' via switches on the front of the computer. You'd 'boot up' a computer by loading this program which enabled it to load other programs.

This is why, despite Amstrad's efforts to introduce the term 'start of day disc', the big bad world of computing still refers to any disc which starts up the computer as a 'boot disc'. It isn't very logical, since nowadays the equivalent of the bootstrap loader is kept on permanent ROM inside the machine, not on disc at all.

Key punching traditions

In the computer industry they still talk about 'punching' keys (because programs used to be punched on cards or tape), and ASCII character number 7 is called BEL since it used to ring the little bell on a teletype. (It produces a beep these days.) There's nothing like a dynamic new industry for producing hidebound traditions.

You have to decide how much jargon you can cope with. One friend of mine who came to computers late in life is determined not to let a single new word on board, and strenuously refers to discs as 'tapes'.

Another has soaked up neologisms even faster than he soaks up booze. Offered a gin and tonic in the pub, he'll say, "No, I'm in beer mode tonight." When asked "Do you really want another? There's a full pint in front of you," he replies: "Ah, I'm double-buffering." And his favourite joke is to croak "Pieces of seven, pieces of seven! – Sorry, that was a parity error." Please don't ask me to translate.

EXIT

A WORD FROM ALAN SUGAR

My pal John Grant (whose message to you all is "I still don't know how to relabel worn-out keyboards, except with Indian ink followed by a coat of varnish") recently finished collaborating with me on a new book. A successor to *Earthdoom!* our spoof of disaster novels, it's called *Guts!* and sends up the horror genre.

Since one subplot involves a teensy nuclear device, and since every chapter begins with unlikely but true quotations we realized at once that hero Alan Sugar's famous remark was a must. You know – about how he'd merrily flog tactical nuclear weapons if there was a market for them.

Alas, my mistake was to be courteous and ask permission. Fearless, hard-hitting Mr Sugar had no hesitation in telling his secretary to "respectfully request that you do not quote him in your book." Another Amstrad publicity opportunity lost....

A WORD ON LOCOSCRIPT 2

It came! Initial impression – ugh. The machine hung up when I first tried to load. OK thereafter ... Loco 1 files are automatically converted but get slightly bigger. My 80K test file grew to 82K.

Jump Straight To Page' on a crowded disc gave me a 'disc full' error and the chance to cancel the operation. When I cancelled the PCW jammed again and had to be restarted. Eventually I managed to compile a table of times taken to get from beginning to end of that test file –

LOCOSCRIPT 1 holding down PAGE key: 9 mins 29 secs with B drive, 7 mins 38 secs with M drive. To FIND a phrase at the very end. 10mins 54secs (B), 9 mins 09secs (M)

LOCOSCRIPT 2 using 'go to page': 1 mins 17 secs (B), 14 secs (M). FIND as before: 6 mins 01 secs (B), 4 mins 45 secs (M).

Drive A and B access times shouldn't be too different, but M is dramatically faster for 'go to page'. For big files on floppy disc it looks as though moving to the end or conducting a FIND will remain (despite improvements) an opportunity to stretch one's legs and visit the loo.

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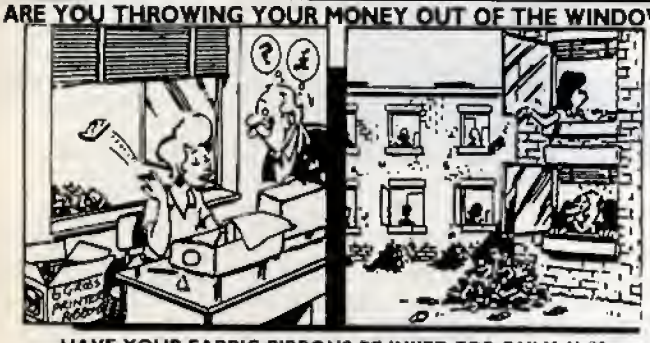

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PLANTING TREES

John Connell reveals some more tricks of the trade for Logo fans

Last month the Logo article looked at, amongst other things, the strange phenomenon of 'Recursion'. The idea of a procedure being able to call itself might not be all that difficult to cope with but, in a full implementation of recursion such as Dr LOGO's, things get just a little more complicated.

Probably the best way to understand something like recursion in Logo is to see it in action. To give you a flavour of one of the deeper aspects of recursion, why not try out these two short procedures – 'coming.down' and 'guess.what?' (dots and question marks can be used just like any other character in Logo names):

```
to coming.down :number
make "number (:number - 10)
pr :number
if :number > 0 [coming.down :number]
end

to guess.what? :number
make "number (:number - 10)
if :number > 0 [guess.what? :number]
pr :number
end
```

Type `coming.down 100` and you will be see the numbers 90 80 70 60 down to 0 printed out on screen. Nothing strange about this. The procedure quite clearly decreases the input number by 10 each time it is called.

Now type `guess.what? 100` and, lo and behold, you are presented with 0 10 20 30....90, despite the fact that the procedure quite clearly again decreases the number by ten with each call. So what is going on?

The crucial difference is in the switching of the third and fourth lines. In 'coming.down', the number is printed on-screen *before* the recursive call, while in 'guess.what?' the printing is done *after* the recursive call. It might help you to understand what is happening if you think of 'recursion' not so much as a circular process, as in a simple program loop, but more as a stacking or coiling process.

If you work your way through the instructions in `guess.what? 100` you will see that the recursive call is made 10 times before anything is printed on-screen, which is why this procedure pauses for a second before you see anything happen.

Once the tenth call has been made (i.e. once `:number` is equal to zero) the procedure has to unwind itself through all the calls it has already made. In other words, once the 'recursion' has ended the procedure, in a sense, goes into reverse and unwinds itself back to the beginning again.

In a procedure like 'coming.down', no instructions are present during this unwinding process, so it is invisible to us. But in 'guess.what?', the `pr :number` instruction is made during the unwinding process, so a value for `:number` is printed out for each of the 10 recursive calls that were made.

When I'm coiling you....

But what use is this process of coiling and uncoiling? If you look at diagram you will see what is called a Binary Tree. If you try to understand the principles involved in programming Logo to draw a binary tree it will give you with some appreciation of a structure which is of general importance to computer programming.

The binary tree has a structure which lends itself naturally to some form of recursion. You can see that it is composed of a Y-shaped tree. Each node (end-point) has two smaller sub-trees, which themselves have yet-smaller sub-sub-trees... and so on. But a little bit more thought than this is required before you begin to build your program.

The procedure will have to deal with the fact that the tree has a right side and a left side, and each sub-tree also has a right and a left side. The final procedure will also have to have some way of stopping itself, either when a specified number of branchings have taken place or perhaps when the branches fall below a specified length. This stopping condition will also allow the unwinding process to occur so that, if you draw the left-hand branchings first you can go back to draw the right hand branchings too.

It will also allow the turtle to end up where it started from and with the same heading – any procedure which does this is known as 'state-transparent' or 'state-invariant'.

When is a stop not a stop

Type in Listing One. There are two ways of stopping this kind of procedure so that it doesn't carry on calling itself indefinitely. The procedure 'tree' stops after a specified number of branchings, but an alternative would be to drop the `:branchings` variable and change the first line to: `if :size < 5 [stop]`. This will cause the procedure to begin to unwind each time a branch is drawn which is shorter than five units (You can, of course, replace 5 with a figure of your own choice).

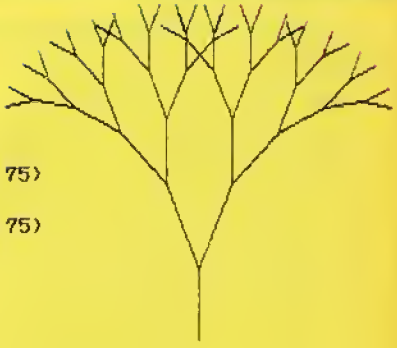
However, the use of `:branchings` makes the procedure a bit more predictable in its outcome than `:size`. You should note too that the unwinding process within 'tree' is a little more complicated than in 'guess.what?' in that it occurs not just once but each time the `if` condition is met.

If you type `tree` the procedure first sets up the 'Stopping Condition'. Whenever `:branchings` drops to zero, `stop` passes control back to the previous time the procedure was called. This is an important point to appreciate – `stop` does not halt a procedure altogether. It merely passes control back to the procedure that called it. Only if there is no calling procedure, the program is halted. If a procedure has called itself during recursion `stop` passes control back to itself.

If you try 'tree' without the stopping condition the turtle ▶

Listing One

```
to tree :branchings :size
if :branchings = 0 [stop]
fd :size  lt 20
tree (:branchings - 1) (:size * 0.75)
rt 40
tree (:branchings - 1) (:size * 0.75)
lt 20  bk :size
end
```



Listing Two

```
to draw.tree :branchings :angle :size
if :branchings = 0 [stop]
lt :angle
fd (:size * 2.5)
draw.tree (:branchings - 1) :angle :size
bk (:size * 2.5)
rt (2 * :angle)
fd :size
draw.tree (:branchings - 1) :angle :size
bk :size
lt :angle
end

to weeping.willow
fs cs
pu bk 100 pd
draw.tree 5 20 30
bk 100 ss
end
```

▲ Weeping willow

draws a line of 80 units and turns 20 degrees to the left. The first recursive call then draws successive lines of 60, 45 and so on (three quarters of the previous line-length), each followed by a turn to the left of 20 degrees. With each turn `:branchings` is decreased by one, until, when it reaches zero after five branchings, a very complicated unwinding process begins.

With each step, the turtle moves back down to the previous node, turns right 40 degrees, and draws the next set of right-hand branchings. Eventually, it reaches the stage where it draws the whole of the right side of the tree.

When you do this don't hide the turtle, since the visible turtle will slow down the drawing process and give you a clearer idea of what is happening. Once you have the idea, however, using `ht` will speed up the drawing of the tree by a considerable margin.

More interesting trees

Listing Two is a modified version of 'tree' which is intended to give a slightly more interesting and realistic drawing. You run it by typing in `willow.tree` without any inputs.

In 'weeping.willow' the angle of turning is specified by you when you start the procedure (some angles give fairly weird results). But more importantly, a bias to the left is provided by the fact that each of the left-hand branchings is two-and-a-half times the length of its corresponding right-hand branching. If you prefer your weeping willow to have a bias to the right (no accounting for taste), then adjust the procedure accordingly. Note that, while the DRAW.TREE procedure is state-transparent (the cursor ending up where it started), the program as a whole is not.

The binary tree is a classic example from a field known as Fractal Geometry, which, in simple terms, deals with recursively-defined shapes. To finish off this month's piece, you might like to try out the procedure contained in Listing Three. This allows you to draw another Fractal shape which here has been called 'snowflake'.

By increasing the value of the variable `:level` in 'snowflake', more and more complicated snowflake-outlines are drawn. In fact `snowflake 0` simply draws an equilateral triangle. Thereafter the number of points on each successive snowflake equals the number of points plus the number of sides of the previous level's shape. For example the triangle has three points and three sides so the next level is a six point star.

With the knowledge gained from 'tree', you can see how 'snowflake' works too. Begin by thinking of the equilateral triangle (since that is what the procedure starts with too) and then imagine each side of the triangle being divided into three equal sections with another equilateral triangle built into the middle section. With each succeeding level, the same thing happens.Each side is split into three with a triangle in the middle section.

You will find when you try the procedure that it becomes impractical to give `:level` anything other than a fairly low value, since the number of points in the snowflake increases sharply. EXIT

Killing the bugs

Dr. Logo provides you with two powerful tools to help you in the process of 'debugging' your Logo programs. Since Logo is a highly interactive language, in the sense that you 'converse' with the computer through Logo, it is crucial to be able to follow fairly precisely what you have asked the computer to do in your defined procedures.

First of all, `trace` (which takes no inputs) allows you to follow the changing values of the variables within a program, and also to follow the procedure calling sequence of the program. It numbers the procedure level you are at, so with a recursive procedure you can see how deeply you are coiled.

'trace' does not halt the execution of the program. This means that, with a long procedure, the information supplied by 'trace' will flash by too quickly for you to take it all in. The best way around this is simply to use the primitive `copyon` which will echo all screen text to the printer. With a hard copy of 'trace's information about a procedure you can study it at your leisure. You can stop the printer echoing all the screen data with `copyoff`.

To end the 'trace' function, simply type `notrace` and things will return to normal.

`watch` (which also takes no inputs) simply and painstakingly works step-by-step through every instruction in a procedure and its sub-procedures. Like 'trace', it numbers the procedure-levels. It follows the level number with a copy of the whole of the first instruction-line in the procedure and waits for you to press [RETURN].

When you do this it proceeds to break each instruction-line down to each of its individual instructions. Again you have to press [RETURN] to take each step. Once it is finished with one instruction-line, it moves on to the next, and so on.

While this is happening, the effects of the procedure being evaluated are also being executed step-by-step so that you can see in minute detail what the procedure is doing. This allows you to find mistakes or simply to note where improvements can be made to the program. The primitive `nowatch` ends the effects of `watch`.

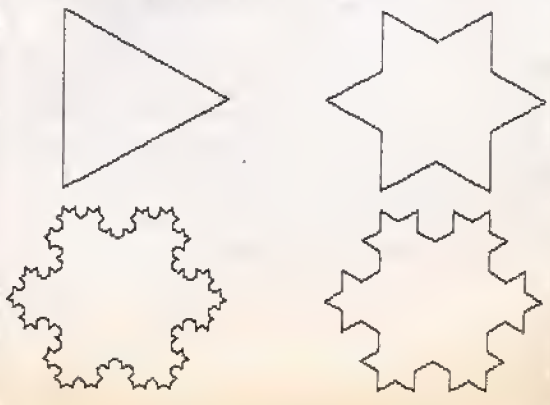
You can create a powerful debugging tool by combining the effects of 'trace' and 'watch'. Simply type each followed by [RETURN]. Incidentally, 'watch', unlike 'trace', also numbers the levels in a recursive procedure.

Listing Three

```
to snowflake :length :level
fs cs
repeat 3 [points :length :level  rt 120]
end

to points :length :level
if :level = 0 [fd :length stop]
points (:length/3) (:level - 1)
lt 60
points (:length/3) (:level - 1)
rt 120
points (:length/3) (:level - 1)
lt 60
points (:length/3) (:level - 1)
end
```

▼ Snowflake. Clockwise from top left, level 0, 1, 2 and 3.



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MORSE CODE

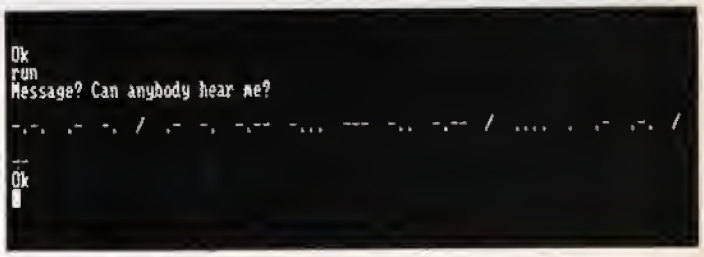
by Trevor Burton

We, in the 8000 Plus editorial team, enjoy the occasional quiet joke. When we were faced with a listing to encrypt files we wrote "we have been inundated with programs to encrypt your files into everything from morse code to hieroglyphics". To be totally honest at that moment that was not strictly true. But rather than see us being branded liars Trevor Burton immediately inundated us with a listing to convert your messages into Morse Code.

This is achieved with the cunning use of the PCW bleep, one for a dot and six in a row for a dash. When you run the program you are asked for the message you want encoded. It then prints out the dots and dashes on screen (with full stops and dashes and slashes between the words) and bleeps away merrily.

The length of time between words is controlled by the '300' in line 160 and the pause between words in the '800' in line 80 so you can change these if they don't suit. The numbers in Data lines 20 and 30 contain all the information so make sure these are right or no-one will understand your messages.

We haven't as yet come up with a totally convincing practical purpose for this but we were certain you would be interested. We await with anticipation the influx of programs to encrypt into hieroglyphics.




```
10 bell$=CHR$(7) : dot$=bell$+"." : dash$=bell$+bell$+bell$+bell$+bell$+"-"      1716
20 DATA 191,190,188,184,176,160,161,163,167,175, 66,129,133, 97, 32,132, 99,128  116E
30 DATA  64,142,101,130, 67, 65,103,134,139, 98, 96, 33,100,136,102,137,141,131  1019
40 DIM code%(36) : FOR i=1 TO 36 : READ code%(i) : NEXT                          109E
50 INPUT "Message";message$ : message$=UPPER$(message$) : count%=0 : PRINT       1C1B
60 FOR i=1 TO LEN(message$)                                                      0A6F
70 index%=ASC(MID$(message$,i,1))                                                0A0C
80 IF index%=32 THEN PRINT "/";:count%=count%+1:FOR j=1 TO 800:NEXT:GOTO 180     1926
90 IF index%<48 OR  index%>90 THEN GOTO 190                                      0EBD
100 IF index%>57 AND index%<65 THEN GOTO 190                                     0EFF
110 IF index%<58 THEN index%=index%-47                                           0D5C
120 IF index%>64 THEN index%=index%-54                                           0D61
130 power%=1                                                                     043E
140 FOR k=1 TO (code%(index%) AND 224)\32                                        0CFF
150 IF ( code%(index%) AND power% ) THEN PRINT dash$; ELSE PRINT dot$;           1865
160 count%=count%+1 : power%=power%*2 : FOR j=1 TO 300 : NEXT                    133D
170 NEXT                                                                         0337
180 PRINT "  "; : count%=count%+2 : FOR j=1 TO 800 : NEXT                        0F91
190 IF count%>75 THEN PRINT : PRINT : count%=0                                   10A2
200 NEXT                                                                         032A
```

SORTERS

One side effect of having to produce an index of the last year's priceless pearls of wisdom in 8000 Plus for this month's issue has been the necessity of a plethora of sorting programs. Well if you have that amount of information to put into alphabetical order you may as well use the power of the PCW.

We ended up with a couple of sorting routines that will take an text file of entries (each on a different line) and sort them alphabetically in BASIC. As this is an area that we have neglected so far we include both programs and leave it up to yourself to decide which suits your purposes. You can create your text file in LocoScript and make an ASCII file using the simple text option. Load the program, insert the disc with your list to be sorted, and run. Both programs ask you for the name of the file you want sorted and the name of the new file you want the sorted list to be put in.

The first is a bubble sort routine in only 18 lines. The idea is simple. Every letter has a numeric value so it is fairly easy to decide which is numerically lower (therefore earlier in the alphabet). It just compares every entry with every other one. If the two lines are out of order with each other they are swapped (line 120). You eventually get to the situation where there is nothing left to swap and the list is then in alphabetical order.

This works reasonably well until you get those really long lists - like an 8000 Plus index for the year. If you are wanting to sort a list of several hundred elements you are better using the Shell-Metzner sort as exemplified in our second listing. This works much faster then the bubble sort because it selects items to compare in a more structured way.

This listing has the added advantage of allowing you to sort sub-entries under a main entry. Just start off your sub-entries with a '-' and list them together under the main entry. The program sorts the main entries alphabetically and sorts any sub-entries alphabetically under their heading too. Now isn't that clever.

```
10 DIM line$(1000)                                                  0485
20 INPUT "Name of file to be sorted";infile$                        11BC
30 INPUT "Name of file to put sorted result in";outfile$            1775
40 OPEN "I",1,infile$:OPEN "O",2,outfile$                           0073
50 WHILE NOT EOF(1)                                                 0705
60 maxline=maxline+1:LINE INPUT #1,line$(maxline)                   1328
70 WEND                                                             0334
80 FOR i=2 TO maxline                                               0809
90 PRINT CHR$(13);"line";i;"/";maxline;                             0D7C
100 FOR j=i TO 1 STEP -1                                            0760
110 IF UPPER$(line$(j))>=UPPER$(line$(j-1)) THEN 140                10E2
120 SWAP line$(j),line$(j-1)                                        0905
130 NEXT j                                                          035A
140 NEXT i                                                          0358
150 FOR i=1 TO maxline                                              0806
160 PRINT #2,line$(i)                                               0EB2
170 NEXT                                                            0337
180 CLOSE                                                           0220
```

```
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Spectravideo joystick: 7, Apr 87, p62
CamBase: 6, Mar 87, p61
PIP:
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Alphabetical sorting using Prospell: 8, May 87, p70
```

▲ A sample from our index before sorting ...

▼ And after sorting with the second sort program

```
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```

```
10 DIM w$(500): PRINT CHR$(27)+"E"+CHR$(27)+"H"                     0D38
20 INPUT "Name of list to sort? ",name$                             0DF7
30 INPUT "Name of file to send sorted data to? ",dest$              141E
40 OPEN "I", 1, name$: OPEN "O", 2, dest$                           0BA4
50 LINE INPUT #1, line$: PRINT: PRINT "Loading...."                 10F2
60 j%=1: w$(1)=line$                                                0A46
70 WHILE NOT EOF(1)                                                 070F
80 LINE INPUT #1, line$                                             0759
90 IF LEFT$ (line$,1) <> "-" THEN j%=j%+1: w$(j%)=line$: GOTO 120   1219
100 t%=j%: WHILE INSTR (w$(t%),"-") > 0: t%=t%-1: WEND              0E8B
110 j%=j%+1: w$(j%)=w$(t%)+"*"+line$                                08F5
120 WEND: PRINT "Sorting...."                                       0B68
130 k%=1: WHILE k%<j%: k%=2*k%: WEND                                0A57
140 WHILE k%<>0                                                     0500
150 k%=(k%-1)/2: i%=j%-k%                                           0536
160 FOR m%=1 TO i%: n%=m%                                           0B5D
170 p%=n%+k%                                                        02B1
180 IF UPPER$ (w$(p%)) > UPPER$ (w$(n%)) THEN 210                   0C61
190 SWAP w$(p%),w$(n%)                                              05F0
200 n%=n%-k%: IF n%>0 AND k%>0 THEN 170                             0A50
210 NEXT: WEND                                                      0594
220 PRINT #2,"INDEX": PRINT #2                                      0917
230 FOR k%=1 TO j%                                                  064E
240 z%=INSTR (w$(k%),"*"): IF z%=0 THEN PRINT #2, w$(k%): GOTO 260  1360
250 PRINT #2,"    "; RIGHT$ (w$(k%),(LEN(w$(k%))-z%))               0C3D
260 NEXT: PRINT "Index completed"                                   0E16
270 CLOSE                                                           031F
```

ERROR MESSAGES

by David Quest

With an insight that boggles the mind Mr David Quest has come up with the theory that the power of any computer package is not shown by the speed, range of facilities or the quantity of output. It is gauged, he suggests, by the obscurity of the error messages. It's obvious when you think about it really.

His research has shown that top programmers can knock up a program in minutes and then spend days devising informative messages like "Illegal Global Drivespec Mixing". But for those who lack the creativity to produce their own original error messages Mr Quest has come up with this little program that produce them for you.

Could we suggest that you use it as a Gosub tied into a mug-trap in your own programs. When you give the user the choice of saying Y or N and they choose Q they will find themselves staring at a message that says "Fatal bitstream buffering violation" or "Severe retrieval format corruption". That'll teach them.

Mr Quest points out that it could be used for producing instant buzz phrases for all sorts of subjects merely by adjusting the words in lines 1000 to 1030, and that new words can be obtained at random from any newspaper or cornflakes packet.

However Mr Quest does admit that his program can never compare with the real thing. We reproduce his own favourite from a mainframe computer operating system. *'VME ERROR 37022: Hierarchic name syntax invalid taking into account starting points defined by initial context.'* You must admit that is much more fun than boring old 'illegal filename' which he insists is the real meaning of the message. Remember that where the a line runs to more than one line on screen (as in 1000 to 1030) just keep on typing and do not use [RETURN].

```
Processing data....

Terminal CPU error check corruption in line 170
Ok
run

Processing data....

Non-recoverable monitor modulation shutdown in line 100
Ok
run

Processing data....

Terminal mantissa register violation in line 120
Ok
run

Processing data....

Processor system consolidation corruption in line 170
Ok
```

```
10 RANDOMIZE PEEK(64504!)                                                    0858
20 DIM w$(4,20),w(4)                                                         0548
30 FOR t = 1 TO 4                                                            04F4
40 WHILE w$(t,u)<>"*" : u=u+1 : READ w$(t,u) :WEND                           0F98
50 w(t)=u-1 : u=0                                                            04E3
60 NEXT t                                                                    03AB
70 x$=""                                                                     0193
80 PRINT : PRINT                                                             0750
90 PRINT "Processing data...." : PRINT : PRINT                               1035
100 FOR a=1 TO 2000 : NEXT a                                                 0928
110 FOR b=1 TO 4                                                             0519
120 x$=x$ + w$(b,INT(1+RND*w(b))) + " "                                      0875
130 NEXT b                                                                   0352
140 PRINT x$ + "in line"(100 + 10 * INT(RND*10))                             0887
150 END                                                                      02C3
1000 DATA Fatal,Severe,Non-recoverable,Untrapped,Unexpected,Online,Memory,Illega
l,Processor,Remote,Terminal,Global,*                                         340D
1010 DATA file,monitor,diagnostic,integer,input/output,retrieval,stack,bitstream
,increment,mantissa,CPU,system,*                                             324D
1020 DATA format,error check,verification,modulation,lookup,consolidation,sequen
cing,assignment,status,buffering,register,load,*                             3AE9
1030 DATA deficiency,failure,corruption,violation,overflow,error,shutdown,underf
low,limit exceeded,breakpoint reached,aborted,*                              3846
```

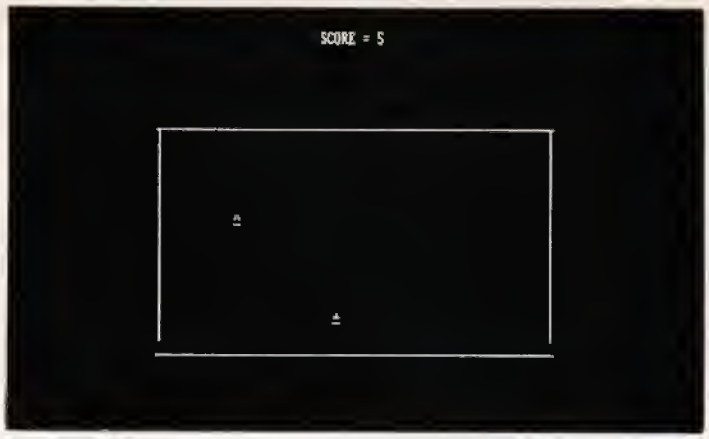
INVADERS

by W Melbourne.

Nostalgia is making a comeback. Following on to our recent listing to reproduce the old bouncing ball game of our childhood another reader felt the muse move him to create a Space Invaders type clone lor the PCW.

Playing is simple. You can move your little gun from side to side with 'z' (left) and 'x' (you guessed it - right) and 'm' lires the bullets. After rigorous testing we suggest you hit the flying saucer before it gets to the bottom.

It would probably have taken more than 19 lines to put in the bombs and the houses to get blown up so just be content with what you've got.




```
10 PNT=0:A$=CHR$(27):PRINT A$+"f":CLS$=A$+"E"+A$+"Y"                          0E19
20 DEF FNAT$(X,Y)=A$+"Y"+CHR$(X+32)+CHR$(Y+32):PRINT CLS$                     10A0
30 FOR P=10 TO 24:PRINT FNAT$(P,18);CHR$(149):PRINT FNAT$(P,73);CHR$(149):NEXT P  1B9B
40 FOR P=18 TO 73:PRINT FNAT$(9,P);CHR$(95):PRINT FNAT$(25,P);CHR$(95):NEXT P  1B85
50 GX=23:GY=19:IX=10:IY=45                                                    0835
60 IY=IY+(INT((RND*2)+1.5))*2:PRINT FNAT$(IX,IY);CHR$(139)                    129E
70 FOR K=1 TO 150:NEXT K:PRINT FNAT$(IX,IY);" ":IF IY>61 THEN GOSUB 140       1749
80 FOR J=1 TO INT(RND*110):NEXT J:PRINT FNAT$(GX,GY);CHR$(129)                16EC
90 MOV$=INKEY$:IF MOV$=CHR$(122) OR MOV$=CHR$(120) THEN PRINT FNAT$(GX,GY);" "  1A56
100 IF MOV$=CHR$(122) AND GY>19 THEN GY=GY-4                                  0E19
110 IF MOV$=CHR$(120) AND GY<71 THEN GY=GY+4                                  0DF5
120 IF MOV$=CHR$(109) THEN GOSUB 170                                          0C8A
130 PRINT FNAT$(3,41);"SCORE =";PNT:GOTO 60                                   0EEC
140 PRINT FNAT$(IX,IY);" ":IY=21:IX=IX+3                                      0EB7
150 IF IX>22 THEN PRINT CLS$,FNAT$(16,35)"YOUR SCORE IS";PNT:PRINT A$+"e":END  1011
160 RETURN                                                                    03BD
170 FOR A=GX TO 12 STEP-1:PRINT FNAT$(A+1,GY);" ",FNAT$(A,GY);CHR$(148):NEXT A  1A23
180 PRINT FNAT$(A+1,GY);" ":IF GY=(IY+2) THEN PRINT CHR$(7):PNT=PNT+1:GOTO 50  1C8A
190 RETURN                                                                    03C3
```

How to type in a listing

The first thing to do is to load Mallard BASIC. Turn on your PCW and put the copy of the CP/M master disc in drive A.

When the A> prompt appears type BASIC and press [RETURN]. After a few seconds a message about Mallard BASIC will appear on the screen, ending with the prompt 'OK'.

Type in each line carefully starting with the line number and ending with [RETURN] although the four figure number code on the right should not be typed in. This is for checking for mistakes with our Checksum program – see Listings Plus for July.

Be careful not to mix up a capital I with a lower case l, capital o with the digit 0, and colons with semicolons.

You should always save any listing before running it. To do this type SAVE "PROGRAM" [RETURN]. You can choose any name up to eight characters in place of 'PROGRAM'.

When you've finished, type LIST [RETURN] and the whole program will appear on the screen. Check it and if any lines are wrong correct them with the 'line editor'. For example if there is a mistake in line 100 type EDIT 100 [RETURN] . Use the arrow keys and the delete key to correct the line, and press [RETURN] when you've finished. You can delete a whole line by typing its number and press [RETURN].

To run the program simply type RUN [RETURN]....and wait for it to go wrong.

It's more than likely that no matter how carefully you typed in the listing it won't work the first time. You may get an error message such as 'Syntax error in 100'. The line number given in any error message isn't necessarily where the error is – it is simply the point at which the PCW gets stuck. You may have to look for the error elsewhere.

You can list out the program (LLIST lists it out on the printer instead of on the screen) and check it against the magazine.

When you find the mistake either retype the complete line or use the line editor as described earlier. Rerun the program and go on correcting it until it works. Once the program is running correctly save it again. To leave BASIC and return to CP/M type SYSTEM [RETURN].

If you want to run the program another day start up BASIC and type LOAD "PROGRAM" or whatever the name you used in place of 'PROGRAM'. Then just type in RUN to run it.

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Access

FREE FILING

Adrian Wilkins squeezes the facts out of DBQ, a public domain database

DBQ is a database which works on fixed fields, either CHARacter (length 1-128) or NUMeric (10 decimals maximum). The best way to explain is to go through an example, so here's how you might set up a small database for controlling membership of a club or society. Suppose you need to store name, address, telephone number, membership number, date joined, and the date on which the membership subscription runs out.

Type the following commands setting up the fields in the record as name, type and length:

```
CREATE CLUB
SURNAME CHAR 12
FORENAME CHAR 12
STREET CHAR 30
TOWN CHAR 30
COUNTY CHAR 30
POSTCODE CHAR 8
TEL CHAR 12
MEMBNO NUM 4
JOINDATE NUM 6
SUBDATE NUM 6
```

In common with may DBQ commands, the ; character terminates the command. This operation creates an empty database called CLUB.DBQ on the disc, and then you need to put some data into it with the command `INSERT CLUB`.

DBQ will now prompt for each of the fields specified above, eg.

```
surname [SMITH ]
forename [JOHN ]
street [30 Forsythia Avenue ]
```

and so on. The square brackets are supplied by DBQ to show you how many characters are available for each entry.

Having inserted one entry DBQ now writes the record and returns for more input. Input into DBQ through the INSERT command terminates when a blank line is typed in at the first prompt of the INSERT sequence, or (strangely) at the last. Having set up the database you can now use it to find information stored within. This is done with the very flexible PRINT command. For starters, to look up the details of all members with the name 'Jenkins' you would use the command

```
PRINT ALL OF CLUB WITH SURNAME } "JENKINS" ;
```

DBQ uses these English-like commands for interrogation. Note that the } character means 'contains' - 'Jenkins' must appear somewhere in the surname. This search will therfore also pick out 'Jenkinson' and 'Mr Jenkins'. All records matching the search will be output to the screen in a tabular form. With the criteria supplied above there is more information than will fit onto the screen, so you can restrict it to surname, forename and membership number by asking

```
PRINT SURNAME, FORENAME, MEMBNO OF CLUB
WITH SURNAME } "Jenkins";
```

Doing the letter writing too

You can use the database to find members whose subscriptions are coming up for renewal and mailshot them. Suppose you do this monthly, and want to locate all subscribers with an expiry date of September. September is the 9th month, so:

```
PRINT USING SUBLET ALL OF CLUB WITH SUBDATE
> 870900 AND SUBDATE < 871000 INTO LST ;
```

The field SUBDATE is numeric, so we are using the comparison symbols > (greater than) and < (less than) to extract all expiry dates after the 0th of September and before the 0th of October (see the margin note on storing dates).

The PRINT USING construction merges the results of the search into the specified format file, in this case SUBLET.FMT. The output goes to the printer, not the screen, by specifying INTO LST at the end of the command.

If on the other hand you require to mail all your members

with a newsletter, then you could define an appropriate format file to print out labels for all your members.

Updating the data

Any field and any record of the database may be updated by a simple operation. To continue the club example, if member number 1356 renews his subscription then you type

```
UPDATE SUBDATE OF CLUB WITH MEMBNO = 1356 ;
```

DBQ will prompt with the current value, which is then amended by the operator as follows:

```
subdate = 870923
subdate < >
```

You would type `880923` inside the angle brackets. You can leave fields unchanged by just typing [RETURN].

The good news and the bad news

DBQ comes with a 40 page manual on the disc, which states that it is not for the novice. This seems a bit negative, and by a little application to the example file that comes too you can quickly pick things up. One limitation is that data files cannot be more than 64k in size, or about 500 average records. It does lack full computational facilities such as Locomail's mathmatics, and the report generators of some more advanced database systems, but if you are just interested in a labelling or mailing system, DBQ could be right up your street.

Where to go

The CP/M user group publishes a quarterly newsletter and runs a vast PD software library. You have to pay a membership fee and they charge a copying fee per disc. Send a large SAE to *The CP/M User Group, 72 Mill Road, Hawley, Dartford, KENT DA2 7RZ.*

Another setup are *P D Software, Winscome House, Beacon Road, Crowborough, East Sussex TN6 1UL* (phone 08926 63298). Again you have to pay administration charges.

Dates

DBQ does not have any special way of encoding dates, so care must be taken if you wish to sort or report on date fields. The recommended method is to use numeric dates of the form yymmdd, e.g. 870826 for the 26th August 1987.

Bits and pieces

Despite its public domain pedigree, DBQ contains many powerful features. It will, for example, add up columns of numeric fields on output if you put a + sign after the print variable concerned.

DBQ can sort the data records into order, although it is pretty slow about it. It permits the import and export of data from and to other systems, eg. BASIC programs and even LocoScript (with the 'Make ASCII 'and 'Insert text' options). It can also join databases in proper relational fashion.

Another useful facility is DBQ's ability to extract from one database and form another with the resulting matches, this being achieved with the FIND and RENAME commands. Thus to continue our membership example above, if you typed

```
FIND ALL OF CLUB WITH SUBDATE <
870101 ;
RENAME CURRENT DEAD
```

then a new database called DEAD.DBQ will be set up which contains all the defaulting members – those whose subscriptions expired before Jan 1st 1987 and haven't been renewed since – with the same details as in CLUB.DAT.

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TIP-OFFS

More shortcuts and by-passes through PCW country

Found a quick way round the back streets of LocoScript? A little known scenic route round some familiar package? The smartest alternative navigations sent to *TipOffs, 4 Queen St, Bath BA1 1EJ,* win £30...

Included this month are an unbelievable way to unerase files, how to spring clean your keyboard and a list of all those annoying cul-de-sacs and one-way streets in LocoScript 2 - and some detours round them. Fr. Peter Weatherby of Reading is now £30 better off for his inspired hack of the Loco 2 program to allow it save blocks.

Blocks for all

One of the few criticisms against LocoScript 2 is that it is no longer possible to save blocks of text for use after the machine has been switched off. They can now be carried from document to document, but they cannot be saved to disc for frequent use – unless you use this little patch. Use a backup copy of your LocoScript start-of-day disc because if you make a mistake on the original the program could be damaged irreparably. The file you want to doctor will be J204LOCO.EMS if you have version 2.04, J203LOCO.EMS on 2.03 etc, and J20LOCO.EMS on 2.00.

Run up CP/M and use SID on the appropriate .EMS file. You will find SID.COM on side 3 of the PCW master discs – if you have an 8512, put the SID disc in the B drive (for 8256s copy SID.COM with PIP into the M drive). Put your LocoScript disc to be modified in the A drive and at the A> prompt type

```
B:SID J204LOCO.EMS
```

[RETURN]
(on the 8256 use M: rather than B: as the prefix). When you see SID's # prompt, type `d804E` [RETURN] and you should see a block of figures beginning with !BLOCK_0$$ somewhere. Key `s804E` [RETURN] (in versions before 2.03 you may have to change the 804E to the address where the !BLOCK_0$$ text starts). The numbers 804E and 21 should appear.

After these numbers, enter `"BLOCK__0` (3 spaces) [RETURN] exactly, no more or less! More numbers appear. After these, type full stop and [RETURN]. The # sign reappears. Key `wJ203LOCO.EMS`, then press [STOP] to leave SID and return to the A> prompt.

Your patched Locoscript 2 is now ready for use. If your version is different you'll have to keep typing `d` and looking through the screen listing until you find !BLOCK_0$$. Just do the same thing using the address of where the phrase starts. The use of SID is described more fully in the June issue of 8000 Plus.

What all this actually does is to make the 'system files' hidden in the first group of drive M: visible, which are the blocks you have saved. These can then be moved about like any other file, and of course, saved to drive A or B for use later. A side effect of the patch is that the systems file J203LOCO.EMS is also revealed (this doesn't matter, but you mustn't erase it! If you want to hide it again, you will need to use SET.COM under CP/M and type `SET J203LOCO.EMS[SYS])`.

Define your blocks as usual, ie COPY a block of text, and give it the numberc 1. Leave the current document and go to the Disc Manager Screen. In the first group of M Drive you'll see two files: BLOCK__1. and BLOCK__P. (Ignore BLOCK__P - this is your current phrases file, and you can't do anything useful with it). BLOCK__1 (the '1' is the block number, 0 to 9) is the block you've just defined. You can check, under [f1] 'Actions - show blocks', to remind yourself how the block begins. Then paste it into any document with `PASTE 1` as usual.

To save a block on disc, simply COPY the BLOCK file from the M drive on to your floppy disc. To load a previously saved block, copy your block from your disc to the first group of the M: Drive, giving it a name which begins BLOCK__ (two underline characters) and which ends with a free number – obviously, you can't have two blocks of the same number. The block is now available to be used.

This patched LocoScript can save and reload blocks but the blocks don't work in quite the same way as LocoScript 1's. You can't use 'Insert Text' to merge a block into your text (use PASTE block number instead) and you can't give any other type of text file (ASCII, LocoScript) a BLOCK__ name and hope to insert it into the text.

You can delete a BLOCK__ file, by using the Clear Key [-] while the Show Blocks is displayed, but it's lost forever; you can't get it back from Limbo, like an ordinary file.

Fr Peter Weatherby
Calcot, Reading

The erased...raised

You're in CP/M editing your 132,000 word thesis in a wordprocessor and suddenly realise to your horror that you've erased it by mistake... disaster! Months of work down the drain! But with a little chicanery you can recover your `THESIS.DOC`.

First, on no account write any new files to the disc containing the file you have just erased. Next make sure you have PIP.COM on the M drive (if it isn't copy it on to M drive). Now *erase* PIP.COM Read on. This isn't quite as stupid as it sounds! Then insert a disc with BASIC on it, run BASIC, and enter the following commands:

```
poke 64480,229
poke 64432,229
poke 64348,229
poke 64040,229
```

and then exit to CPM with the command `SYSTEM`. Up will come the prompt F9A>. The pokes have persuaded the machine that you're now in user group number 229 (don't believe the F9) where CP/M stores the files it has 'erased'. If you type DIR now, you'll see the names of many deleted files, though of course most of their contents will have been overwritten with new files by now. (As this is the trash heap, if you ERA a file here it just won't go away!) Now, because you've just 'erased' PIP, it appears here in group 229 too, so after reinserting your erased thesis disc you can use PIP to copy the file back to group 0 of your disc (the land of the living where unerased files are normally stored) with

```
M:PIP M:THESIS.DOC[G0]=
   THESIS.DOC
```

Type `USER 0` and everything will be back to normal. Try a DIR on drive M and you'll see your precious document back where it belongs – now you can copy it back to your work floppy disc and carry on normally.

What is really happening here is that when you erase a file you don't wipe it from the disc – you only make CP/M think that you have stored it in user group 229. Normally when you type `DIR` the machine looks round for all the files with the current group number. If you persuade the PCW that the group you are in contains all the files with the address mark E5 up will come all the erased files.

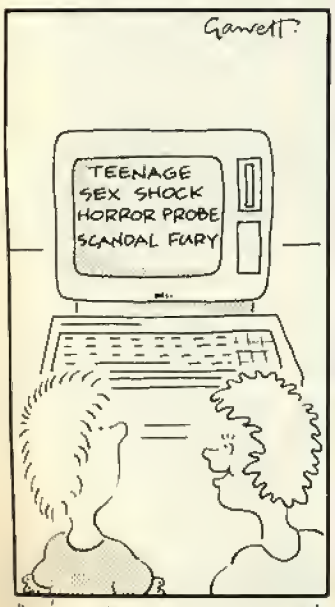
CP/M gradually re-uses the space that erased files took up as it needs it, so if you write a new file to a disc you may overwrite previously erased files.

```
A)dir
A: THESIS   DOC : BIBLIOGR PHY : INDEX       : NOTES
A)era thesis.doc
A)dir
A: BIBLIOGR PHY : INDEX       : NOTES
A)era m:pip.com
A)basic

Mallard-80  BASIC with Jetsam   Version 1.29
(c) Copyright 1984  Locomotive Software Ltd
All rights reserved

31597 free bytes

Ok
poke 64480,229: poke 64432,229: poke 64348,229: poke 64040,229
Ok
system

F9A)m:pip m:thesis.doc[G0]=thesis.doc

F9A)user 0
A)dir m:
M: THESIS   DOC
A)_

                                        Drive is A:
```

Easy hard copy

You can obtain hard copy from any BASIC listing without ever using an `LPRINT` command. Once the screen printout is to your satisfaction merely type `POKE 8792,205` and re-run the program. All the screen output will be printed out as well. When finished just enter `POKE 8792,195` to return to normal. Remember that screen cursor positioning commands may not work on the printer and that the width of the screen and the printer may be different.

Dave Atkin
Basingstoke



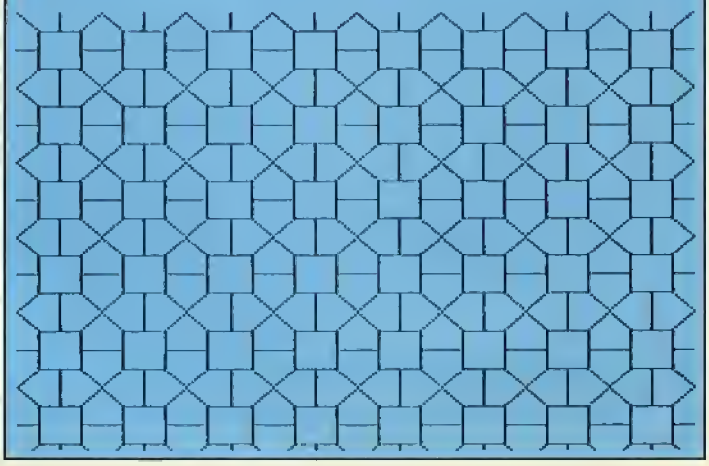
"IT'S A NEW WORDPROCESSING PACKAGE CALLED 'SUNSTAR'"

Put yourself on the map

When playing adventure games it's essential to keep a map showing your progress. The following LOGO listing will print out grids for you with cells and compass directions. After typing in the listing run the program by entering `begin` [RETURN]. To get a small print of the pattern you can do a screen dump, but to get a full-size version, use Anthony Gravell's BASIC listing (8000 Plus, Feb, or on our subscribers' disc) by answering GRID when asked for the file name. The command "savepic" in line 8 automatically writes the picture to disc and you'll need at least 23k free on your disc.

Paul Hodgson
Alnwick, Northumberland

```
to begin
cs
fs
pu
start
pd
ht
repeat 8 [again]
savepic "grid
end
to start
make "x -315 make "y -215
setx :x sety :y
pd
end
to square
pd
repeat 4 [fd 15 lt 90 fd 15
  bk 15 rt 90 fd 15 lt 45
  fd 21.2132 bk 21.2132 rt
  135]
pu
fd 60
pd
end
to again
repeat 8 [square]
move
end
to move
pu
make "x :x + 60
setx :x sety :y
pd
end
```



Speedy SuperCalc

Working with involved spreadsheets in SuperCalc can be a laborious process as every time new information is entered all the entries are recalculated. However, if you select the 'manual' on the Global option you only get a recalculation when you want it, which you get by typing a ! This speeds up large spreadsheets considerably.

Addressing...the problem

The Protext Address List (Tip Offs, June) fills a gap in an otherwise excellent system. However giving each address a short name code is awkward if one has hundreds of addresses to remember. With a simple modification it is possible to get Protext to produce a sorted printout of you address list, or to sort them into any order you like such as the most used ones first.

Type out the addresses in any order but do not type in the short name code suggested in the original tip. Print out the list and then, starting with the 'A's, give each address a number - 01, 02, etc - there is no need to get all the addresses in strict alphabetical order.

Load the address document again and copy in the number at the top of each address. If you type the number again at the end of the address you can then print out all your addresses alphabetically. With the ENV document from the original tip type `PQ ENV` and then the number of the address starting, of course, with 01. This will produce a printout in the chosen order with the reference number by each -- if

you do not want the number to appear on the print out simply remove it.

The advantage of this system is that when you come to add a new address, all you have to do is to add a decimal point, for example a new address to come between nos. 25 and 26 can be numbered 25.5.

If you have a large number of addresses, it is a good idea to list the most used ones at the start of the program, as they will be printed out quicker.

Earl Attlee
House of Lords

Renovating keyboards

Keyboards which have been around a bit may be sticking through accumulation of months of dust, gunge and torn out hair. Here is a brief guide to overhauling your keyboard and switching around the keys if for instance you have changed to the Dvorak key layout. This invalidates your guarantee, but sticky keyboards will most probably be past the expiry date anyway.

You need a Philips screwdriver, a very small screwdriver, a small pair of tweezers, and some cotton buds. Turn the keyboard upside down, unscrew the six screws on the bottom and lift the top half of the casing off. Be careful not to touch the circuit board underneath the right hand side - maybe cover it with a soft cloth.

Each key has two toggles that fit into the plate and prevent the key coming off, a central column that fits into the hole, a small spring fitting into that column, a large spring going around the outside of the column, and a small plastic pin fitting into another small hole.

Remove the keys from top right (PASTE) by rows. Use the small screwdriver to gently push the toggle inwards, grip the key with the other hand and pull upwards from the top of the board. Don't lose the large spring as the key comes out. It's best to leave the RETURN, SPACE bar and two SHIFT keys as they are very finicky to replace.

Clean the flat surfaces around the base of the keys with a barely moist cotton bud (electronics don't like drops of water) and remove the hairs with tweezers. Clean inside the large holes too with the buds - the stickiest keys will be the dirtiest! You can then use the tweezers to pick out the debris that has collected underneath the holes, taking care not to touch the plate beneath.

Clean the insides of the keyboard covers and you are then ready to reassemble, so if you want to re-ink the keys or use the Dvorak layout, now is the time.

So long as the springs are still there, the keys should just press on. Finally replace the unit into the top cover, fit the bottom cover, replace the screws, and your cleaned up and non-stick keyboard is ready for use.

Mark Morris
Abergavenny, Gwent

Quickies

There are a few useful control commands in CP/M and BASIC (TipOffs, August 87) and the PCW is set up so that unless changed by a SETKEYS program many of these commands are produced by some of the word processing keys, as follows:

CP/M only: [COPY] copies the last line. [f7] causes all subsequent screen output to be echoed on the printer, or stops it. [CUT] deletes everything typed and gives you a new line to type in although it leaves the deleted line on the screen with a hash mark at the end for reference. [RELAY] puts a hash mark at the end of the input line and reprints the line below to clear any odd effects caused by editing.

CP/M and BASIC: [f5] pauses current operation; [f3] resumes.

BASIC only: the 'cursor left' key copies the last line; [FIND] while editing moves the cursor to the next occurrence of the next character you press, eg [FIND][a] goes to the next 'a'. [CUT] deletes up to the next occurrence of the next character you press and [+] switches between 'insert' and 'overwrite' modes of entry.

Since [FIND] and [CUT] themselves can't occur in BASIC program lines, [FIND][FIND] is a good way to jump to the end of a line and [CUT][CUT] will quickly delete to the end of a line.

Philip Barrett
Cambridge

Small is beautiful

The SETLST utility provides a useful addition to Start of Day discs. For example, you can use a file created in RPED called PRINT containing the single line

```
^'ESC'SI^'15'
```

which, given a command line in the PROFILE.SUB file consisting of SETLST PRINT, makes the printer default to condensed text. This is tidier for many wide BASIC listings, for scripting HitchHiker's Guide to the Galaxy, and so on.

David Laverton
Rye, Sussex

"WHY DIDN'T SOMEONE LET US KNOW GARETH: WAS ON HOLIDAY?"

LocoScript 2

There have already been more versions of LocoScript 2 than Rocky films, all for the best reasons. Locomotive have been busy ironing out some of the kinks that lurk in the far recesses of the program. The latest version (2.04) should have killed all known bugs (all the ones below have been fixed) and you can get the latest version free of charge by sending your master disc back to Locomotive so long as you enclose a description of the bugs you've encountered. If you just collect new versions but haven't found a particular bug there is a £5 upgrade charge. Meanwhile, if you have one of the earlier versions you may have had a spot of bother with some of the following:

Down in the dumps

Screen dumps on version 2.00 won't work – if you try pressing [EXTRA] and [PTR] everything crashes. If you want a printout dump of the disc manager directory screen you can get it by running Loco 1.

Two into one won't go

If you attempt to create a new document with the same name as an existing one, you will have the option of cancelling or overwriting the new file over the old one. Unfortunately, on early versions of Loco 2, when you come to save the new file, you find your only option is to cancel and lose the entire new file. Moral: don't try to overwrite, create a new one and rename it afterwards.

It's a setup

In Document Setup ('f1=Actions' in Edit mode), the f5 (Page) option has a couple of mixups in early versions. "Final page number" in the "set pages" option should read "Total pages" (as in 'f5=Document' option on the disc manager screen) and in the "Header/ footer options" menu "First page footer enabled" and "Last page header enabled" have been transposed.

Turn of phrase

There are various idiosyncrasies with the Show Phrases option, and depending on the version you have, you may find Phrase S only appears if there's a Phrase R, and Phrase T appearing whether empty or not. Phrases also have been known to unaccountably change letters between saving and restarting again. Some of these may be due to having the sequence `(+Pitch 10)W(-Pitch)` stored as Phrase W (!), some not. Be reassured that from 2.03 onwards Phrases should work without a hitch, even if you have `(+Pitch 10)W(-Pitch)` in Phrase W.

Peter Townsend, Wirral

Prevention better than CR

The "Prevent widows & orphans" option (Document setup, then f5) may appear not work on Loco 2. This isn't a bug but is the result of a new definition on 'paragraph' adopted by the new manual, concealed on page 63 in the 'Textual Movement Key' section. Loco 2 only treats paragraphs as separate if there's either a blank line, or an extra spacing produced under CR+, between them.

If it seems that widows and orphans are appearing you'll have to introduce extra CR spaces or hard returns between the offending paragraphs.

Mark Lambert
Sturminster Newton, Dorset
Gareth Price
Lowestoft, Suffolk

Marginally faster

To insert tab codes when editing layouts in LocoScript 2 place the cursor in position and press the [+] key one to four times, depending on the type of tab you want. To clear individual tabs, place the [-] key with the cursor over the tab you want to delete.

To alter the margins, place the cursor on the left hand margin and press [+] or [-] repeatedly. The margin moves with the cursor. Then press the space bar. The cursor jumps over to the right hand margin which you can shift similarly. Surprisingly, none of this is in the manual!

Ruth Berry
Chepstow, Gwent

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ASD PERIPHERALS

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These pages provide a comprehensive guide to the Amstrad PCW software. Published in three monthly parts, this time it's the turn of Databases, Education, Communications and Programming packages to face the ultimate test. We've set out to cover every important piece of software we could lay our hands on, and to give you enough information to decide whether they are suitable for you.

Any software not listed here has either not been reviewed by us yet, or has been left out to make space for better programs. As well as a brief summary of what they do, the main Plus and Minus points for each program are listed – Pluses have a ☐ by them, and Minuses a ■. Those we think are particularly noteworthy have an corner flash on them. Have fun window shopping!

DATABASES

There are broadly two different types of database, and which suits you best depends, of course, on what you want it for.

Firstly there's the simple card index substitute. For many home users, this will be the kind of thing you want – all it does is store your address book or stock items so that you can easily look them up.

A more sophisticated option is the programmable database. With these, in addition to allowing simple card index retrieval there is a command language which allows you to analyse the data on the cards. For example, you could automatically add up the money owed to you by all your customers from Yorkshire. To make best use of this kind of facility, you will need to be able to understand a little programming, although it's not too hard really.

A bit of jargon now. A database is said to consist of records – this is just like a card in a conventional card file, with all someone's details on it. Each record is composed of fields – a field is a single entry on a card, like someone's name, or age, or postcode.

The thing that makes a database special is an index. You might be able to hold your address book as a simple list in a word processor document, but if it gets large then this becomes unwieldy. An index means that the database has worked out which order records should be in, so it can go straight to the one you want without looking at lots of others first.

The field that you use as your index (e.g. someone's surname) is said to be a key field, and can be looked up very fast compared to "non-key" fields. A good database will allow multiple keys, meaning that it can look up data just as fast for a variety of types of information.

Masterfile 8000 — Best general buy

£49.95 • Campbell Systems • 0378 77762/3

A specially written PCW version of the successful database sold on other Amstrad computers. It is fully menu controlled, and makes good use of the PCWs special screen and keys. It can deal with up to 8 separate data files at once, so can cope with relational databases. Printed output can be elaborately laid out with boxes, lines etc.

PLUSES • MINUSES

- ☐ Works fast
- ☐ Wide range of Layout options
- ☐ Handles 'relational' files
- ☐ Plenty of good example files
- ☐ Can do arithmetic calculations within its records
- ■ Capacity limited by size of M drive – best on an 8512
- ■ Takes a while to learn all the features

Condor 1

£99.99 • Caxton Software Ltd • 01-251 9494

Condor is firmly pitched at the dBase II market. Like dBase, it is not only a filing system but also a programming language that allows command procedures for complex data operations. It can handle very big records — 127 fields — handy for some things like questionnaire processing. The user interface is slightly ragged, and it lacks dBase's ability to index files for fast access.

PLUSES • MINUSES

- ☐ Very flexible record structuring and searching
- ☐ Better control than dBase over the screen format
- ☐ Command language for creating data processing programs
- ☐ Can handle big databases — up to 127 fields per record
- ☐ The manual is large, well written and understandable
- ■ No provision for fast data access by indexes
- ■ The on-screen prompting information is weak

Database Manager (AtLast) — Good value

£29.95 • Rational Solutions • 0279 412441

Recently re-released with a new manual and a new price, At Last is a full-featured database that is excellent value for money. It does what Cardbox can, with much better reporting facilities, and can sort too. You can do simple totalling of columns, but not general arithmetic on fields in a record. Its claims to be a true 'relational' database like dBase II are a little grandiose, but a good general purpose database – recommended.

PLUSES • MINUSES

- ☐ The basic form layouts are generated automatically
- ☐ The data can be indexed on more than one item
- ☐ Good screen editing facilities
- ☐ Printed reports can include totals
- ☐ Subsets of records can be selected using sophisticated rules
- ■ Manual sometimes lapses into computerese
- ■ Page dimensions have to be specified every time you want to list things, even to the screen
- ■ Can't do general arithmetic within fields

Cambase

£49.95 • Camsoft • 0766 831878

Cambase is very strong on data security – you can define passwords to protect sensitive databases. It is driven by quite an intricate set of menus, and you'll have to plan your application carefully since the database format can't be changed once set up. Generally good for writing applications with.

PLUSES • MINUSES

- ☐ Sensitive data can be protected by a password system.
- ☐ Record structure can be conditional – e.g. "only have a 'spouse' field if status is 'married'"
- ☐ "Processes" provide for some simple automatic calculations
- ■ Over-protective user interface, which asks for confirmation of almost every command
- ■ Database main attributes are fixed after initialisation and can't be changed.
- ■ Doesn't have full screen editing of records
- ■ Manual needs an index, and is weak on explaining advanced topics
- ■ The (single) key field has to be entered separately to the record data proper

dBase II — Raw but powerful

£99.00 • Ashton Tate/First Software • 07357 5244

The WordStar of database packages. Recently licensed "cheaply" for Amstrad machines, dBase II is a market leader in

business computing. As you would expect, this means it is very powerful but very complex. It has a procedure language to allow you to write programs to manipulate the data, and you can construct index files for really fast access to large databases. If you can make the effort to learn it, it'll serve you well.

PLUSES - MINUSES

- ☐ Powerful command language for customised programs
- ☐ Indexing facility makes large databases fast to handle
- ☐ Can handle very big databases
- ☐ The data can be fairly easily altered after its entry
- ✱ Manual is daunting (but there are plenty of independent books on the market)
- ✱ Can't easily alter the screen record layout
- ✱ For an expensive package, you still only get 32 fields per record
- ✱ Generally unfriendly unless you have some programming skills

Delta — Powerful

£99.99 • Compsoft • 04868 25925

Delta is another of the heavyweights, like dBase II and Condor, but unlike them is fully menu driven. Although the screen layouts are fully flexible, there is a default "quick" layout so you don't have to sweat at defining your own. It could use better record indexing facilities. Particularly good for writing applications, once you have ploughed through the large manual.

PLUSES - MINUSES

- ☐ Records can contain up to 90 fields, plus groups of fields that may be repeated
- ☐ Screen layout can be user defined, or "quick" mode used
- ☐ Single-page letter writer provides detailed mail-merge
- ☐ Processes can be defined, and run from user defined menus, for ease of use by others
- ☐ Very full, and quite readable, manual
- ✱ Only one field may be used for indexing
- ✱ Very big program – a PCW8256 would be hard pushed
- ✱ Some of the menu operations are unforgiving to errors

Pocket InfoStar

£69.50 • MicroPro/DRA • 0386 841181

Consists of two large programs, DataStar and ReportStar (both available independently). DataStar is a conventional database, with screen card layout and indexing. ReportStar then generates the printed output, either from DataStar or CalcStar files. Powerful if you can use them, but the suite is horrifically overcomplicated, and the documentation just incomprehensible.

PLUSES - MINUSES

- ☐ DataStar is a quite good database with indexing and calculated fields.
- ☐ "Transaction processing" feature allows cross-referencing of data files.
- ☐ Can be integrated with other Pocket products, eg WordStar.
- ☐ Can take up to 255 fields per record
- ✱ Two-volume manual set is very badly organised.
- ✱ There are separate programs to run for form design, data entry and reporting.
- ✱ Operation is all by obscure command keys, à la WordStar.

Cardbox

£59.99 • Caxton Software Limited • 01-251 9494

As the name suggests, this database sets out to be a straight replacement for a conventional card index system. It doesn't provide any facilities for totalling up fields in different records, but does provide comprehensive ways of searching records. Very flexible screen layout, set up by a screen editor. Although a well established product, it is hard to see who would want a database which can't sort its data into order!

PLUSES - MINUSES

- ☐ Good control over the screen layout of each record (or "card")
- ☐ Can put any title or prompt text anywhere you like on the card
- ☐ The documentation makes Cardbox very simple to use
- ☐ Wide range of data patterns that can be searched for
- ☐ Elaborate indexes can provide efficient access to data
- ✱ No way to sort the data into alphabetical order
- ✱ No control language or field totalling facility
- ✱ Slow to access unindexed data

Cardbox-Plus

£99.95 • Business Simulations • 0892 863105

Business Simulations are the company who actually wrote the successful Cardbox database, and they are the sole distributors of their enhanced version Cardbox-Plus. Disappointingly, still no field totalling facilities, but it does boast sorting, index listing, disc management and an autosave feature as extras to Cardbox. The ultimate straight card index, if you have the money.

PLUSES - MINUSES

- ☐ All the facilities of the very successful Cardbox
- ☐ Cards can be sorted into order for browsing and printing
- ☐ "Autosave" will regularly store the data to disc in case of mishap
- ☐ Files created by Cardbox can be read
- ☐ Full and good manual, although the tutorial is at the end
- ✱ Still no way of performing numeric calculations
- ✱ A lot to pay for a few frills to the basic Cardbox

Smartcard

£59.95 • Focus Computer Sys. • 0272 420109

A conventional card index database which bears a superficial resemblance to Cardbox. As ever, you have to define your record format before you can enter any data. Small and fast, you can sort the records, index on up to 3 fields, and do simple arithmetic in fields. Can't put background text (eg. titles) on records or printouts.

PLUSES - MINUSES

- ☐ Good clear screens
- ☐ Plenty of on-screen help
- ☐ Fast and high capacity
- ☐ Easy to use
- ✱ Can't put background text on printed reports
- ✱ No way of exporting data for mailmerge

Datafile One

£30.00 • Datarun • 0332 810789

This database is both a low cost card index system and a mail merge utility specifically designed to work with LocoScript 1. As a card index, it's quite good for personal use, and the mail merge is simple but effective. Good value for money. The documentation is in the form of a database on the delivery disc.

PLUSES - MINUSES

- ☐ Data can be range checked as it is entered
- ☐ Complex masks can be used for searching the database
- ☐ Quite fast record access for a low cost package
- ☐ Report section (the mail merge) uses LocoScript documents for templates
- ☐ LocoScript text styles (bold, italic, etc.) can be used
- ✱ The screen editor for designing layouts is a bit too simple to be effective
- ✱ No conditional processing in the mail merge section
- ✱ The on-disc documentation is a nice idea, but cumbersome in practice. Needs a proper manual.

DataStore

£39.95 • Digita International • 0395 45059

Previously marketed by Gemini as 'DataGem'. A simple card index type of database written in Mallard Basic. Although it is quite slow in some areas, it does use index files which makes retrieval of individual records quite quick. It allows calculations on numeric fields and can print out totals and averages from your data files. New version promised for August which will be faster and allow data import/export.

PLUSES - MINUSES

- ☐ Adequate performance on simple files
- ☐ The manual has a good introduction on explaining database jargon
- ☐ Numeric fields can be calculations, like in spreadsheets
- ☐ Good variety of printout formats
- ✱ Complex searches take a long time
- ✱ No data import/export facility

Chibase

£49.95 • Chiasma • 06333 60996

A 'free format' database, which means you don't have to go through the usual rigmarole of defining your record format before you can enter your data. Instead, you just type text into Chibase, mark the words to be indexed, and it can then treat that file as a database.

PLUSES - MINUSES

- ☐ Doesn't require you to set up a preset 'record' card
- ☐ Searches through your data very quickly
- ☐ Allows you to select up to 50 keys for each page of text
- ☐ Allows editing of text without a word processor
- ✱ No sample file for you to learn on

FT=DB — Simple & effective

£29.95 • Encyclasoft • 0270 811868

A free form database like Chibase, but instead of typing your text into the database itself, you create it on a wordprocessor first of all. Once done and edited to your liking, you mark all the word you want to be used as keywords (still in your wordprocessor) and then read it into FT=DB. Now you can treat it as a database, compile indexes, search for phrases and so on, all quite efficiently.

PLUSES - MINUSES

- ☐ Easy to use
- ☐ Versatile retrieval system over several text files
- ☐ Inexpensive
- ☐ Can move between index and text at will
- ✱ No editing facilities within FT=DB

First Base — Beginners' best buy

£29.95 • Minerva • 0392 37756

Billed as a simple database for the first time user, First Base is quite a competent cheap card index. The manual is computer printed, and weak on diagrams which doesn't help things. One weakness is getting printed results out of First Base – either you settle for crude lists, or you have to create a template in LocoScript which is awkward to do. But overall, for simple applications and beginners, it's pretty good value for money.

PLUSES - MINUSES

- ☐ Can alter the index field at any time
- ☐ Simple to use screen editing make data entry easy
- ☐ Good value as a simple card index lookup system
- ☐ Can easily browse through the database picking out a set by hand
- ✱ Manual is badly laid out and generally difficult
- ✱ Producing printed output is awkward

Magic Filer

£69.95 • Sagesoft • 091 284 7077

Magic Filer is not a true database, but is a structured filing system. Information is split into a hierarchy of categories, and tagged with a keyword which is not stored as part of the data. You can browse through the data, but it will get tedious if you find it needs updating regularly. Many applications will find Magic Filer restrictive.

PLUSES - MINUSES

- ☐ Good for browsing through data when you don't really know what's there
- ☐ Data can be declared "read only" to protect it from alteration by other browsers
- ✱ The basic filing system is weird but not wonderful
- ✱ Editing data once in Magic Filer is awkward
- ✱ The documentation is far too brief
- ✱ You can only have one database per disc

Microfile (Sold in The Micro Collection)

£49.95 • Saxon Computing • 0401 50697

Microfile is a well implemented simple database, driven by plenty of menus and on-screen prompts. It's fast and has good screen control, although it has some size restrictions. Microfile comes as part of a software suite,"The Micro Collection", which is good value (Microfile, Microwrite, MicroSpread, Flexilabel and Lock-It)

PLUSES - MINUSES

- ☐ The price includes competent word processing, spreadsheet, labelling and encryption programs
- ☐ Plenty of menus and on-screen prompting
- ☐ Very flexible formatting for screen layout and printing
- ☐ Numeric fields can be expressions to be calculated
- ☐ Indexing is fast and can be on several fields
- ✱ Maximum number of fields per record is only 20
- ✱ Limited facilities for totalling up fields in a database

File Manager

£99.95 • Sandpiper Software • 0978 355333

A database with the power to handle full relational applications. Unfortunately the manual is so badly written that the power is hard to get to. For the money, there are better systems around.

PLUSES - MINUSES

- ☐ Potentially a powerful and flexible system
- ☐ 'RAPID' generator can produce simple files quickly
- ✱ Appalling manual
- ✱ Poorly customised for PCW use
- ✱ The full system is very complex to use

Matchbox

£29.95 • Quest International • 04215 66488

A cheap, no-frills card index type database. The manual is only 13 pages long, so you had better know you to use a database before you buy this. You can't customise screen layouts, but you can print labels. Would suit a simple booklist or address list, if you really can't afford better.

PLUSES - MINUSES

- ☐ Clear on-screen menus guide you through the program
- ☐ Can search for fragments of words in a record
- ✱ No control over screen layout
- ✱ Skimpy manual (13 pages) has almost no examples
- ✱ All characters have to be upper case
- ✱ Only a single index field is allowed
- ✱ If you type fast, you will lose characters

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EDUCATIONAL

Cornix Card-Index — Good value
£34.95 • Cornix Software • 0462 682989

A good standard cardbox with sorting on any field and a neat feature where names can be entered as Smith [John] for correct indexing but will print out as John Smith. Selection can be done in any combination of fields on a basis of words or fragments of words appearing in records. There are no numeric functions and numerals are treated as strings, so for example £89256.19 will be sorted before £9 and 3-9-87 before 6-1-86. You can print out any selection of the fields in reports, though the format is restricted to one field to a line.

PLUSES • MINUSES
- ☐ Sorts on any field
- ☐ Names printed in given name-surname order
- ☐ Selection over combined fields
- ☐ Simple but effective
- ✱ No import/export of data
- ✱ No numeric calculations
- ✱ Dates, numbers must be entered carefully to be sorted correctly
- ✱ Only one data file can be put on each disc

Sagesoft Retrieve
£70 • Sagesoft • 091-284 7077

A high-power package that is relatively easy to use with password security if desired, calculations, automatic counting or deletion of sets of records satisfying given conditions, sophisticated sort and select commands, and the ability to change the structure of an existing database. All this is done by a set of commands rather like a programming language. Printed formats are rather limited though and the program insists on using both drives, making use on a 8256 impractical.

PLUSES • MINUSES
- ☐ Easy to use for a powerful package
- ☐ Advanced sorting and selection commands
- ☐ Subsets can be written to files
- ☐ Can count or delete subsets with one command
- ☐ Labelling/mailmerging routines included
- ☐ Can change structure of existing database
- ✱ Impossibly big program for 8256
- ✱ Printed output limited – must use mailmerge

File'n'find — Cheap!
£9.95 • Lentronic • 48 Elmete Mount, Leeds LS8 2NU

A budget database which aims to provide a simple no-frills service. Programmed in Mallard BASIC it looks a bit ragged, but works fairly swiftly. If all you want to do is catalogue a collection, it could be an extraordinary bargain.

PLUSES • MINUSES
- ☐ It's very cheap
- ☐ Has all the necessary features for simple inventories
- ☐ A potential source of programming tips for Jetsam programmers
- ✱ Amateur and unfriendly way of working
- ✱ Maximum 8 fields per record
- ✱ Unhelpful manual full of programming jargon
- ✱ Cumbersome retrieval and editing facilities

Homeview
£195.44 • Cavalier/Load & Run • 0322 72116

A specialist database for the Estate Agenting business. Costs a lot, but then all you estate agents should be able to afford it from your outrageous commission fees (yes, the 8000 Plus staff have all recently moved house). You specify required area, no. of bedrooms etc, and get a list of suitable vendors or buyers. Works well.

PLUSES • MINUSES
- ☐ Once set up, simple enough for non-computerate staff
- ☐ Makes up mailshots from LocoScript
- ☐ Can adjust property categories to suit
- ☐ Impresses your customers!
- ✱ There will always be clients whose requirements don't fit your system
- ✱ Very expensive

Iankey Crash Course — Best basic course
£24.95 • Iansyst • 01-607 0187

A fairly traditional typing tutor, taking you through basic keyboard exercises. There's a lot of explanatory text, which gets in the way second time around. Definitely competent, but a bit boring.

PLUSES • MINUSES
- ☐ Mostly avoids boring letter drills
- ☐ Very full on-screen information guides you along
- ☐ "Fast" option cuts out some text if it gets repetitive
- ✱ Not particularly imaginative use of graphics
- ✱ It doesn't always ensure that the cursor is properly aligned with the exercise text

2 FingersTouch Typing — Improvers' best
£24.95 • Iansyst • 01-607 0187

Despite its provocative name, a useful typing tutor in that it specifically caters for people who can already get by on keyboards with two fingers. You are gradually introduced to touch typing, so your speed doesn't drop while you learn. Fills a necessary slot in the Typing Tutor market.

PLUSES • MINUSES
- ☐ Suitable for improving two-finger typists without much drop in speed
- ☐ Full on-screen instructions
- ☐ Exercise text is interesting paragraphs, not letter drills
- ✱ Explanation text is annoyingly verbose in some lessons
- ✱ It doesn't always ensure that the cursor is properly aligned with the exercise text

Touch 'n' Go
£24.95 • Caxton Software • 01-251 9494

A very traditional typing tutor, with no attempt at interesting screen presentation. Letter drills are rigorously pursued, making for good typing practice if you can stick to it. Also has number keypad tuition for data entry operations.

PLUSES • MINUSES
- ☐ Methodical letter drills enforce good practice.
- ☐ Provides number keypad tuition as well as letters.
- ☐ Instruction screens are optional, so can be cut out for speed.
- ✱ Gives a flattering error rate, since it allows you unlimited use of the delete key.
- ✱ Doesn't tell you how to make the number keypad actually work on the PCW!
- ✱ Boring use of the screen. You need to really *want* to learn.

Animal Vegetable Mineral • World Wise
£14.95 each • Bourne Educational • 0794 523301

Aimed at the younger market, 7-15 year olds. Both these programs work by learning as the child uses them. Think of an object and the computer tries to guess it. If it is wrong, the child is asked for a question which would allow the PCW to be right next time, and it learns.

PLUSES • MINUSES
- ☐ Can be used as many times as the child's imagination holds out
- ☐ Performance can be analysed by a teacher after a session
- ☐ As you build up a base of objects and questions, they can be saved for reuse
- ✱ It needs a lot of typing, hence a lot of supervision
- ✱ The PCW starts with only two objects known , so it takes time to get going
- ✱ Documentation has hardly been altered from cassette-based versions
- ✱ Since it is for young children, more imaginative use of the screen would be nice

Better Spelling
£12.95 • School Software Ltd • 010 353 61 27994

This is a spelling course aimed at the 8 to adult age group. It consists of a series of well organised, short lessons each dealing with one topic, like plurals or which version of there/their/they're to use in a sentence. The use of the PCW screen is rather unimaginative, and doesn't hold your attention.

PLUSES • MINUSES
- ☐ Well thought out lessons to emphasise particular points
- ☐ Teaches words in a sentence context as well as in isolation
- ☐ Lessons can be picked in any order from a menu
- ☐ Seems to be proof against mischievous key pressing
- ✱ Boring use of the screen doesn't grab interest
- ✱ No instructions come as to how to use the program.

Chemistry • Biology
£12.95 • School Software • 010 353 61 27994

These two are fairly traditional question-and-answer tests. You are faced with a choice of 10 topics, and then asked 10 or so questions each, where you have to fill in the blank in a statement. There are preamble notes beforehand, and if you get it wrong you are given a clue. Aimed at 12-16 year olds.

PLUSES • MINUSES
- ☐ Questions would challenge a GCSE pupil well
- ☐ Preamble notes introduce topics
- ✱ The fill-in-the blank questioning style has little flexibility for different answers
- ✱ No option to add questions for a specialised syllabus
- ✱ Some careless errors, like incorrect facts and hard to decipher chemical formulae

Micro Maths — Well designed
£24.95 • LCL • 0491 579345

Supposedly covering 8 to adult ages, this seems an O-level type program, covering topics from caculus to tables. A good implementation on the PCW with proper use of the screen. Questions are picked at random from a pool, so may repeat but never run out. Replies to questions are typed in mathematical notation, like X^2+3

PLUSES • MINUSES
- ☐ You can pause to use BASIC as a calculator while you think
- ☐ 'Unlimited' question set
- ☐ Comes with a 'free' book of AEB O-level questions
- ☐ Good hints and explanations when you get an answer wrong
- ✱ Questions in a topic repeat occasionally
- ✱ Some frills, like the clock and beeper, are annoying
- ✱ No flexibility to add questions for a particular syllabus

Amstat 1,2,3 and 4
£30-ish • Coleman • Ashby-de-la-Zouch LE6 5DA

A suite of four statistical routines including a business analysis program, forecasting and resource management. Individual prices range from £27.95 to £39.95, all four cost £99.95. Sophisticated but perhaps awkward for beginners.

PLUSES • MINUSES
- ☐ Good range of statistical functions
- ☐ Good manual
- ☐ Can produce fair quality graphical results
- ✱ Some editing procedures very long-winded
- ✱ Needs some expertise to use properly
- ✱ Weak on checking that input data is reasonable.

Oxstat
£113.85 • Medstat Ltd • 0602 411120

This is a specialised statistical analysis package for the PCW. Functions from calculations of means to multiple linear regression are covered, and it can do some rudimentary graphics for results. You can read data from spreadsheets or external devices.

PLUSES • MINUSES
- ☐ Comprehensive range of statistical functions implemented
- ☐ Good screen editing facilities for entry of data
- ☐ The speed seems acceptable, even though it is written in BASIC
- ☐ Even complex analyses are easily entered by simple menus
- ✱ Weak on graphical presentation of results

Yes Chancellor! — Different!
£17.50 • Topologika • 0733 244682

Wait! Don't skip over Yes Chancellor! because it calls itself an 'economic simulation' program. Instructive and fun to use, you type in your annual budgets (tax rates, public spending etc.) and see your popularity plunge and the economy crash. Great for economics classes, also an amusing game in itself.

PLUSES • MINUSES
- ☐ Simple but effective model of the economy
- ☐ Comes with booklet explaining economic principles
- ☐ Great for teaching economic and political pragmatism!
- ✱ Can get boring as a game
- ✱ You can't adjust the model of the economy, so it can be too simple

THE GOOD SOFTWARE FILE

PROGRAMMING • COMMUNICATIONS

PROGRAMMING

Programming languages come as either 'compilers' or 'interpreters' – compilers pre-process the program into machine code, so are much faster. The PCW's standard Mallard BASIC and Logo are both interpreters. Compilers are generally more cumbersome to use than interpreters, but have obvious benefits.

Programming is a new section in the Good Software File, so will grow over the coming months. With language compilers in particular it is difficult to know whether they are reliable and efficient without spending many weeks working with them, which is impossible for a brief review. If you use a specialised programming language and have any comments that would help us compile a Good software File entry for it, we would be pleased to hear from you.

Pascal
£39.95 • Hisoft • 0525 718181

A standard full Pascal compiler

PLUSES • MINUSES
- ☐ Well integrated text editor – when you hit a compilation error you are returned to the correct point to edit it
- ☐ Short compilation time, economical on memory
- ※ Manual makes no attempt to teach you Pascal

Forth
£19.95 • Hisoft • 0525 718181

Forth is an unusual language, somewhere between assembler and C. This is one of the few compilers available for the PCW.

PLUSES • MINUSES
- ☐ Comes with a Forth editor
- ☐ Quick and efficient implementation
- ※ Manual doesn't try to teach you Forth

MIX C
£53.90 inc. editor • Advantage • 0844 52075

American C compiler. You can buy the compiler alone for £31.95, or the screen editor alone for £21.95. Also machine code assembler module for £8.95.

PLUSES • MINUSES
- ☐ Features a C tutorial
- ☐ Comprehensive implementation and massive manual
- ※ Not for the newcomer to programming

Modula 2
£45.00 • FTL Grey Matter • 0364 53499

A compiler. Modula-2 is the successor to Pascal, good for large programs requiring separate compilation.

PLUSES • MINUSES
- ☐ Full implementation with extensions
- ☐ Includes libraries of predefined modules
- ☐ WordStar-type screen editor included
- ※ Compilation process is longwinded and not for beginners

ZBASIC
£75.00 • Zedcor Grey Matter • 0364 53499

Compiler

PLUSES • MINUSES
- ☐ 400 Page manual, not badly written
- ☐ Compatible with Microsoft BASIC, hence simple Mallard programs (not Jetsam)
- ☐ Extensions like extended IFs, REPEAT ... UNTIL
- ※ No direct access to CP/M from ZBASIC
- ※ Seems to reject some statements as 'too complex'.

The VICAR
£29.95 • Iansyst • 01-607 5844

A programming tool for serious programmers. If you have a several-hundred line program held in several files on a disc, you can lose track of which variables are used where. The VICAR produces a concordance listing and other diagnostics, to help you find bugs and maintain the program.

PLUSES • MINUSES
- ☐ Easy to use but still flexible through use of options
- ☐ Amstrad versions all at a special low price
- ☐ Good manual
- ※ Only of value on large programs
- ※ Limited value to most PCW users (except BASIC buffs)

IT'S BASIC — *Good value*
£7.95 • Nabitchi Computing • 051-708 8775 0123

Games with a more serious intent. This program provides 20 simple games and applications and allows programmers to look at the Basic to see how it's done and to adapt it for their own programs. You can play music on your CP/M and create your own Space Invader figures.

PLUSES • MINUSES
- ☐ Twenty programs at rock bottom price.
- ☐ Invaluable tips for programmers.
- ☐ Costs little more than a blank disc.
- ※ No tutorial guidance.
- ※ Non-programmers may get bored.

COMMUNICATIONS

Communications is one of the glittering areas of computing, gurus would have you believe. It can provide a fascinating hobby for 'hackers', but more importantly it is a valuable business tool.

'Electronic mail' is just what it says: you use your PCW to send messages, which can be documents thousands of words long, to others on the electronic mail system. The best known system of this kind is Telecom Gold, which also allows you to send telexes. Another major system is Prestel, which is more of an information provider – you can read share prices, weather information and other news direct from your phone line.

For any professional service, you pay a registration fee, plus a connection charge – typically around 10p per minute you use the system. Of course, your phone bills are extra. For hobbyists there are also 'Bulletin boards', which are effectively a kind of private electronic mail system run by a system operator (a 'sysop' to those in the know).

To use any service, you will need to buy a modem and an interface. A modem allows you to send computer signals down a phone line, and the interface gets the signals from your PCW to your modem. The pair will set you back £200 or more. Once done, you need some software to allow you to send and receive data, and it is this software reviewed below.

Electronic mail services just send strings of characters to and fro, whereas Prestel is a 'Viewdata' system, meaning it sends pictures and graphics too. Software needs to do more to receive Viewdata graphics, so if you want to use Prestel make sure your software is up to it.

8256UKM7.COM — *Public domain*
Public domain (ie. free!)

P.D. software documentation is often poor but this program has an above average document file. UKM7 was written to support ASCII file transfers using error correction and as a dumb terminal either for use over the phone or between two Amstrads. Between two PCW's file transfer is possible at a staggering 31,250 baud which is even faster than PIP! Easy to use for beginners and better than KERMIT, UKM7 provides a cheap and excellent way to communications after you've got fed up with the PCW's MAIL232. 8256UKM7 is available from the Public Domain Special Interest Group, or most bulletin boards supporting the PCW machines.

PLUSES • MINUSES
- ☐ Cheap! (the price of a phone call)
- ☐ Easy to use, and helpful menus
- ☐ Both CRC and Xmodem protocols supported
- ☐ Single file and Batch Mode transfers
- ☐ "Quiet" mode for slightly faster transfers (on-line transfer progress report disabled)
- ※ Only ASCII, no Viewdata
- ※ You need to find a PD software source (eg. use a modem and MAIL232 software)

CHITCHAT E-MAIL/VIEWDATA/ COMBO
Sagesoft • £69.99 £69.99 £ 99.99 • 091 284 7077

Two communications programs for the 8000 series machines that have been around for a good time now. Most of the features you will need are here: message text editor, preprogramming unattended tasks(if you use a suitable "intelligent" modem), directory of stored numbers, copy to printer, and a very useful connect time clock so you can watch your phone bill climb! E-mail is used for simple text phone links like Telecom Gold, whereas you'll need Viewdata if you want to use Prestel. The Combo pack contains both E-mail and Viewdata.

PLUSES • MINUSES
- ☐ Good, clear documentation
- ☐ Easy for first timers to use
- ☐ Built in text editor for pre-sending message preparation
- ☐ Pre-definable tasks executable at any preset time if unattended.
- ※ No error corrected file transfer (i.e. Xmodem or CRC)

Dialup
£89.99 • PMS Communications • 021-643 7688

Offers both E-mail and Viewdata operations. Very easy to use, and offers an XMODEM transfer protocol unlike Sage ChitChat. If you are buying a modem too there are some cut-price bundled deals to be had, eg. the Miracle Technology WS4000 modem.

PLUSES • MINUSES
- ☐ Simple to use
- ☐ Comprehensive file transfer commands, including XMODEM and the increasingly popular KERMIT
- ☐ Runs from the M drive
- ※ Manual is not PCW specific, and the references to 5.25" discs are tedious

COMM+ — *Powerful & versatile*
£86.25 • NewStar • 0277 220573

This single package combines both ASCII and full Viewdata block graphics and Telesoftware downloading. A very powerful command language allows you to look for particular messages coming in and take actions, even while doing other things. Its use is only limited by your programming ability.

PLUSES • MINUSES
- ☐ Very comprehensive and well indexed ring bound manual
- ☐ High quality Viewdata graphics
- ☐ Well presented on-line help menus for use by beginners
- ☐ Autodialler program works with most manual modems
- ☐ Telesoftware downloading facility, with CRC/Xmodem checking
- ☐ Very powerful command language, doesn't need much programming skill to learn
- ※ Not recommended for absolute beginners to communications

NEXT MONTH

The guide continues next month with the categories of SPREADSHEETS, GRAPHICS and GAMES . The month after that will cover WORDPROCESSORS (inc. DTP) . ACCOUNTS PAYROLL and UTILITY software. and the month after that it's back to this month's topics.

Our intention is to keep publishing the three parts of the guide in rotation, updating it each month to include all new products. If you would like to see other sections of the guide, back issues of 8000 Plus are available at £1.50 each

Meanwhile, if you are aware of any significant omissions or errors in the File as published, please let us know. We intend to maintain it as THE authoritative guide to PCW software.

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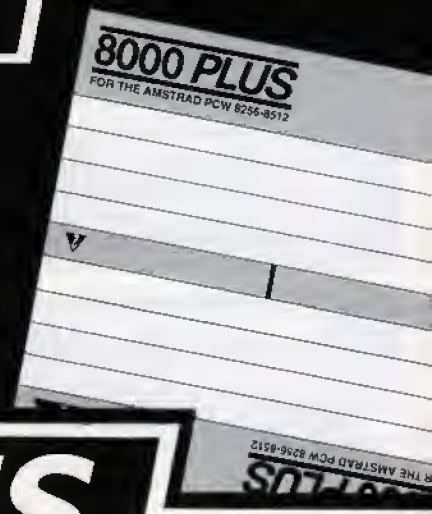

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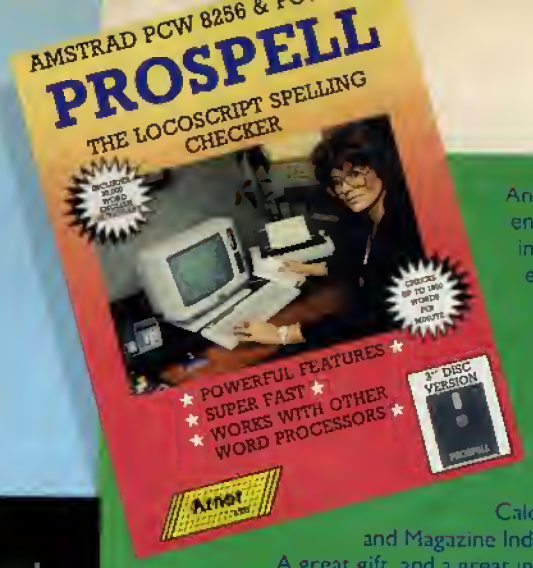

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POSTSCRIPT

A collection of cosmopolitan communiqués culled by a candid Ed

This month's batch of letters range from aggrieved manufacturers to a heart-warmingly sycophantic ode on our first birthday issue. If you would like to chip in a comment or question, write to *PostScript, 8000 Plus, 4 Queen Street, Bath BA1 1EJ.*

Despite our pleas last month, nobody at all sent us a holiday postcard from Majorca. The special secret prize for the best postcard – which we can now reveal was to have been a mink lined PCW carrying case – is therefore being kept by the editor.

Cavalier attitude

I read with interest your review *Able Labels* in the July edition of 8000 Plus, and was disappointed to note that you considered that there are only two main labelling programs on the market capable of producing junk mail labels.

Alec Rae has already reviewed our own labelling program *Teleadd*, which can print variable size labels, optionally selected by name, category or business type, and in addition to this will allow the home computer user to store and extract addresses based on wedding anniversary and birthdays. It is simple to operate from a menu, and unlike the two packages you reviewed does have an add on facility *Teleplus*, which allows you to export selected names and addresses to word processing or database packages, a report generator which includes the ability to design your own labels, and the ability to further extract data from the database of names and addresses. As an added bonus it is cheaper than either of the packages which you quote, at only £21.95.

Your magazine has in the past produced some very fair reviews of our packages, and we in no way disagree with your current review, we think however that your article should indicate that there are certainly three, if not more, labelling programs available for the PCW, and not give the impression that the two which you reviewed are the only ones worth consideration.

Bill Weeks,
Cavalier Software, London SE15.

Character building

Are there any peek valves by which the computer can find out if a pixel (or character) is printed at a point on the screen? Further are there any ways of directly plotting characters, or pixels to the screen using any POKE valves. If so does anyone know what they are?

Peter Bricknell,
Hurstpierpoint, W. Sussex.

You've obviously cut your programming teeth on the Spectrum or similar favourite home computer. You can't get at the screen memory directly by PEEK/POKE from BASIC because of the way the PCW is designed (for boffins, the screen's memory is in a different bank to BASIC's), and anyway the screen memory stores pixels not character codes. However, you can achieve the desired effect in BASIC itself:

```
DEF FNat$(r,c,c$)=
CHR$(27)+"Y"+CHR$(r+32)+
CHR$(c+32)+c$
```

sets up to print a character or string at any row and column you like. `PRINT FNat$(2,3,"z");` *will print "z" at row 2, column 3.*

Discs against cancer

Thank you for the mention in the July magazine of the help service I offered to readers with disc problems. I have already received many requests for help and discs and letters daily drop through the letter box! Clearly a lot of people were having the same kind of trouble as my own friends.

I have had a good deal of success with these disks so far and I can usually salvage most of the files, if not all. Usually there is in fact little real corruption and the main problem is the difficulty of picking up the files from the directory tracks and finding the blocks on the disk allocated to them.

Although a typical salvage takes me 2 hours on average out of my spare time, and despite the family protests about "always being on the computer", I am not asking people to pay me for this time. Instead, if I have "got them out of a hole" I am asking them to consider making a donation, equal in terms of their own salary to the charity BACUP, although I am stressing that it is entirely without obligation. I thought this apposite title might not only catch their imagination but might also reinforce the 'backing up' principle. Judging by the number of people who have passed my name on to non-8000 Plus readers who then write to me I expect this may actually be gaining you some extra sales. Perhaps your magazine might therefore adopt this worthy charity to reinforce the backing up message.

David G. Smith,
Paddock Wood, Kent.

Your flying disc doctor service is certainly a labour of love and I'm sure there are many readers out there grateful for your help. BACUP is a charity for Cancer relief. Any donations should be sent to 121/123 Charterhouse Street, London EC1M 6AA.

"... INVALUABLE FOR WRITING UP THE EXPEDITION"

Middlesex PCW/CPM User Group

As Chairman of the above group, I felt that you would be interested to hear of our formation. As you will gather from our title, we are endeavouring to meet specific needs of PCW users in the Middlesex area.

The group plans to meet on a regular monthly basis, with meetings on the 3rd Monday. At the present time we have not found a regular meeting place (ie. public house!!), however it is planned to hold them in the Northolt/Hillingdon area.

Subject to space requirements, I would be obliged if you could find a couple of column inches to give our group a mention, and that new members are welcome and should contact me regarding venues/times etc.

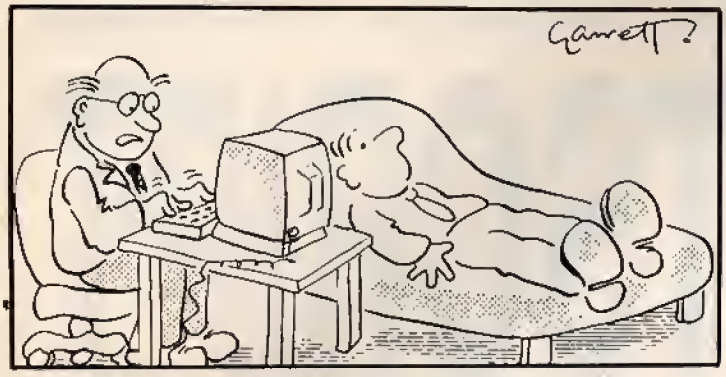
Robert D. Ford,
Northolt, Middlesex.

The joy of sticks

I would like to congratulate you on an excellent magazine, which, as a complete newcomer to Computers when I purchased my PCW in November last year, has been an enormous help in enabling me to understand the mysteries of LocoScript, Basic, and all those questions I was afraid to ask; except one!

The exception is Joysticks, I have no idea how these work or how best to connect them to the PCW. Does the connector have to be a specific kind? Does the Joystick have to be a certain make? Can a Joystick be set up to use any keys? what do the various knobs and buttons do? Is there a "best" Joystick for the PCW? I have in mind in particular the use of a Joystick for games taken from your listings ie. Snakey, Squash etc. which my grandchildren love to play, but in so doing knock hell out of my keyboard.

I am sure all your 10 year old readers would fall about on reading the above, but if you don't know



"... AND WHEN DID THIS FEAR BEGIN THAT COMPUTERS WERE TAKING OVER?"

you can provide will be appreciated, perhaps even an article in your magazine in the near future.

And finally; in common with a lot of other people, I missed the first two issues of 8000 Plus. Have you considered printing a special Double Edition of these Issues or have you thrown the plates away?
A.C. Broadbent,
Sale, Cheshire.

Not a silly question at all. You need to buy a Joystick adaptor to slot on the PCW's rear expansion port – these cost around £20 and are available from (among others) Spectravideo, Kempston and Cascade. This provides a standard 9-pin D-type socket which any standard Joystick can fit into. If you want to adapt our BASIC listing to recognise Joystick wrenches rather than key bashes, the Spectravideo Joystick is a good buy (£29.95, 01-330 0101, or main Smiths' branches). A TipOff in our April issue explains how to program it.

I'm afraid the prospects of us reprinting issues 1 and 2 are slim – print runs of less than 10,000 or so are uneconomic. Don't forget you can buy the TipOffs, CP/M and LocoScript articles and Listings now reprinted in special booklets.

Going Loco

I have recently acquired and started to use LocoScript 2 and have run into a problem with converting my Loco 1 files to Loco 2. The actual conversion through the editing mode works O.K. and the page lengths on screen work out the same. BUT, when I come to print the documents none of them will now fit the A4 format they were designed for on Loco 1 because the printer now leaves a wider gap at the top of the paper which I can find no way of reducing. The result is that there are always about three or four lines to be printed on the next sheet of paper. Does anyone know how I can get round this? As the documents are rather long tutorial seminars, designed to be presented for students' files, the Loco 2 printing is inconvenient. Do I have to type the whole lot again into the new format?
D.W. Cooling,
St. Briavel's, Glos.

Loco 2 should get the page length right in the conversion process – are you sure you originally defined the page length as 70 for A4 paper? If not, what you will have to do is modify the document's paper type to make the page length shorter: in the document itself, check what paper type it uses by looking in the Document Setup menu [f5]. Back in the Disc Manager, use the [f6] 'Settings' menu to modify that paper type's characteristics.

Basic BASIC

I am the proud owner of a six month old PCW8512 and now that I have got used to Mallard BASIC's little idiosyncracies (no CLS command etc.) I quite like the language.

In September I will be starting an AO Computer Studies course at school. This course will be done on "BBC Bs" and "Masters". I have heard that it is possible to obtain a version of BBC BASIC to run under CP/M. I would very much like to be able to write programs at home for projects. So, I would be grateful if you could tell me if BBC BASIC is available for the PCW and if so where I could obtain a copy.
Colin Thompson,
Stamford, Lincs.

Dear, dear, such low tech machines as BBCs. It is possible to get a version of BBC BASIC for PCWs from Timatic (0329 236767) at £99.95. On humanitarian grounds it is really your moral duty to convert your college to the joys of PCWs and Mallard BASIC!

Zaphod Beeblebrox writes

I'm not heartless by nature, but through ignorance I've been running my PCW for about 18 months without cleaning the heads. On my Hi-Fi. I do this about once a week.

My PCW has lately been sending me rather inscrutable messages; sometimes it even refuses to acknowledge the presence of the start-of-day disc and asserts that the drive is empty. Do you think it's trying to tell me something?

Could you please ask one of your experts to tell us, in the name of humanity, how we can start being fair to the PCW by cleaning the heads? Somehow, I don't think that ordinary shampoo would be the answer. It may need a bit of dismantling, but 8000-Plus readers are learning to take that in their stride.
Denis Crowley,
Clwyd, Wales.

I clean both my heads with Head and Shoulders every couple of days, but then that's nothing to do with PCWs. Seriously though, the lack of a disc drive cleaning kit for the PCW is puzzling – they are common issue for 5¼" disc drives such as on IBM PCs. Many readers have complained of unreliable discs, and a quick clean would do no harm. So all you manufacturers out there take note: there is a market opening for 3" disc drive cleaners. In the meantime you'll have to live with dirty heads by taking regular backups of your discs. You certainly shouldn't try to dismantle your drives to clean them.

Court appearance

Precisely what is a Microwriter and can I use one in conjunction with my 8256?

I understand that it's a kind of hand-sized typewriter which only has five keys. I'm a freelance journalist who does a lot of court work, and it would be handy to be able to 'type' my copy while sitting in the press bench then dump the story into the office Amstrad later.

Where can I get hold of a Microwriter and the relevant software? I never seem to see them advertised nowadays – maybe because the prospect of learning the keystroke combinations is so daunting!
Mark Mitchell,
Gloucester.

Hmm. As I recall, your description of a Microwriter seems accurate. It is a portable five keyed typing device which you can connect via a serial interface to a computer at the end of the day an unload your typing. The five keys means that you have to learn a typing shorthand – letter 'V' might be keys 1 and 5, ie. thumb and little finger. I haven't seen it advertised for some time now, and it may have gone the way of all silicon.

A better bet might be one of the current portable laptop computers which have a conventional keyboard and eight line display. The Tandy 102 costs around £300 (from all Tandy stores) and seems reliable, or you could wait for the fabled Cambridge Computers (Clive Sinclair's outfit) Z88 portable at £200, currently three months late and counting.

Once the file has been copied across to the PCW, you can read it into LocoScript, fine tune it and print it.

Strange chaps, these women

I am an ex-headmaster in my 70's and have owned my Amstrad 8256 for six months. During that time I have been appalled by the inadequacy and poor presentation of handbooks accompanying software. Often, one feels that the author is deliberately trying to obscure the truth!

I always taught that the fundamental sign of an educated man was to be able to express oneself clearly in speech or writing. Einstein is alleged to have said: "if I cannot put it into words, I do not understand it".

What a pleasure, therefore, to find that the handbook accompanying the new LocoScript 2 is a model of lucidity and clarity. After a week I feel thoroughly at home with the new system. Well done Locomotive Software. I should like to think that the author was one of my old boys!
G.F. Dixon,
Southport.

It's certainly an impressive manual for a £20 program, congratulations to all a t Locomotive. Unfortunately I've some bad news for you – if the author of the manual is one of your old boys then he's a transvestite. The writer habitually wears women's clothes and goes by the name of Jean Gilmour.

Black Euromark

I'm writing to inform you that I've only just formed a club called AEII (Anti-Euromark International Inc.) Just over two weeks ago I wrote to Euromark to purchase the Starglider game. I would like to inform Mr. David Nissan that the only reason he got his personally delivered was because he lives in the NW sector (which happens to be quite close to their company). I still haven't got my game after just over two weeks and 6 phone calls!
Steven Blackwell,
London, SW11.

My illusions are shattered after the nice things we printed about them last month. Ah well, that's life.

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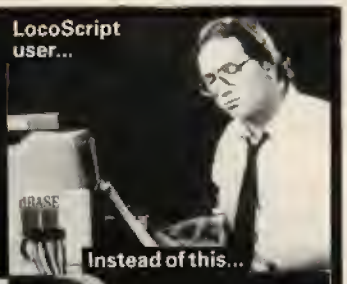

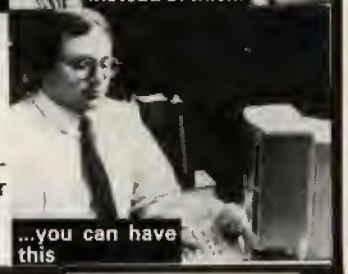

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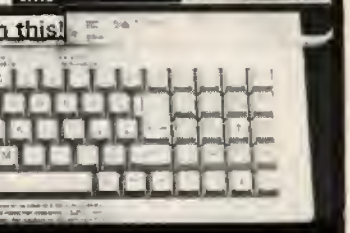

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Happy birthday

Okay I know it is a little early but my subscription renewal goes off in the same post and you must be getting near the final edition of Number 12.

All at 8k Plus must have put in a great deal of hard work because it really does show in the magazine.

As part of my job I go through nearly all computer mags each month. There is no other to equal the excellent mix of information, listings, entertainment and the wry, dry sense of humour between the covers. The "feel" of the magazine was right from the first issue, hence my subs that month. Perhaps there was an element of luck in the mix and format, certainly a considerable element of risk in launching yet another Amstrad based mag. But you have beaten the whole field. The only disappointment is that others have not risen to your challenge and continue with inaccuracies, hard-reading prose and lack-lustre layouts. Beats me how certain mags sell off the shelves at all!

Should you all start to suffer from terminal expansion of the cranium apply the safety procedure .... exit to the nearest alcoholic beverage. Very best wishes and more power to your team. I look forward to another excellent year of the magazine.

Peter C. England,
Havant, Hampshire.

You sweet talker you. It's nice to be appreciated, and I'm sure you'll let us know if we slip up in the next year!

Paper trouble

Having had LocoScript 2 for all of four days, I am slightly surprised to find that the old 'Blocks' system has been abandoned. For some time now we have been using this feature to store blocks of text for use in valuation certificates which we prepare. Since many articles of the same kind have very similar descriptions, it is ideal to be able to 'Insert Text' of the correct type into our pre-set template and then do minor alterations to it. We already have an extensive stock of 'standard descriptions stored as Blocks, which I have now discovered how to convert into a form usable with Loco 2, but adding to them seems to be rather convoluted.

If I interpret things correctly, to save a block of text in a similar way to the old system one has to:

'Copy' it into a Block
'Paste' it into a blank template
Convert it into ASCII code
Save it in the appropriate Group for later use

Am I right, or is there a simpler way?

D.M.W. Evans,
Evans & Evans, Hampshire.

It is true that you can't explicitly save blocks to a permanent disc file (unless you read this month's TipOffs), but it isn't as bad as you think. You first type your standard paragraphs directly into LocoScript documents (one each), and use the 'Insert Text' command to include them at the right point in another document. You don't need to make an ASCII file of the document, or even use the Blocks system at all.

Faint praise

It has happened once too often! It is all very commendable and tree-saving to put a squeeze on the listings you publish, But I feel strongly that either you might print the listings in enhanced density, or if, as I suspect, you photocopy them into the magazine, then you should make it a requirement that programmers should list out in high quality. It is very difficult to read the faint print in, for example, the "Disc Labeller" listing, in my copy of the August issue; very awkward, using a magnifying glass with manipulating the keyboard.

I do hope you will manage to read this letter more easily than I can read your listings.

L. Birkett,
Halesworth, Suffolk.

Listings are a permanent bugbear with magazines. Our listings are photo-reproduced from PCW printouts done directly from BASIC in high quality bold text, which seems to be acceptable to us. The alternative is to typeset the listings, but we tried this once and the scope for introducing misprints caused too much trouble. A PCW printout from a working program is the safest way. Maybe we can do a reader offer on magnifying glasses next month.

Prospell on Loco2

Re LocoScript 2. Can LocoScript 2 be spelling-checked using Prospell? I wrote to Locomotive asking this and was advised to enquire from Arnor. Arnor replied to my subsequent enquiry advising it "probably" would, but I should contact Locomotive for definitive advice. All of this could develop into an interesting circular exchange of letters, so I ask the Oracle, prior to purchasing LocoScript 2, can I use Prospell to check it in exactly the same way as I use it on LocoScript 1?

PS. Did you know that HAL (the computer in 2001) is a "son" of IBM? Just subtract one letter from each of I B M !!!

John P. Langley,
Gwynedd, Wales.

We've tried out Prospell directly on Loco 2 files and it won't read them. You can always make an ASCII file of your Loco document and spell check that with Prospell, but it's a bit of a bore. Arnor don't reckon it is commercially worth their while to write a new version of Prospell, particularly since the newly announced PCW9512 will have LocoSpell bundled free with it.

PS. Yes I did. Doesn't subtracting one letter make it the father?

Drawing conclusions

After reading your graphics review in the July issue of your publication, I feel that a few matters concerning DR Draw should be clarified.

Firstly, the 'area move' option that you give Draw would be better described as a windowing option, since it serves only to move the printing and screen windows around the workspace, and does not allow for the 'grouping' of a number of drawing elements [ie individual lines, arcs and polygons], which can then be moved. This means that if you were to draw two sketches in a piece of work, you could not move them relative to each other, except element by element, ending by repositioning each of the elements back into the sketch.

In addition, and more importantly, DR Draw will randomly distort your work: even before half of the stated 200 element capacity has been reached. This is a fact, it seems, that Digital Research already know about. This is hardly surprising when one considers the age of the program. What is more surprising is that DR have been able to sell this faulty software with no intention of correcting the bugs.

As a final note of warning, the Greek fonts demonstrated in the manual are not implemented in the CPC/PCW issue, so don't spend too much time looking for them. Apparently, the disc was full, and you can't expect another £3 disc in a £50 package, can you? After all, think of the cost!

In short, think very carefully before you purchase this package. Although it is cheaper than many other packages, it is at the cost of a lack of reliability and versatility. It may well be worth considering paying half as much again to buy a better package (as I am now considering).

Ian Baker,
Prestwood.

Adding the Internal B Drive

In my article in the August issue, 'Give Your PCW Extra Drive', text in Suppliers box was altered and produced a small factual error. As can be seen from the illustrations, the outer cases of the upper and (both types of) lower drive are of steel, which provides screening at the frequencies involved. The internal frame of the improved drive's mechanism is of cast aluminium, offering better precision in placing the mechanical parts during manufacture.

Ken Lenton-Smith,
London, SW16.

As you say, it is the steel casing not the optional aluminium frame which provides the magnetic shielding. Sorry for the error, but we were only repeating what one of the suppliers told us.

I smell an ode

My PCW works all day
It's hard to put the thing away.
Keyboard, printer and VDU
Groan at all the work they do.
But it makes me money and
that's not bad
It's the best machine I've ever
had.

My PCW works all day
And printed this poem bright and
gay
It makes a change from letters
galore,
Theses, manuscripts and
statements that bore
But I do admit to one small cheat
My daisywheel printer is much
more neat.

My PCW works all day
And I use it's powers in many a
way.
It can stop the children making a
fuss
While I sit down and read my
8000 Plus.
A light pen is all that you require
As to budding artists they aspire.

My PCW works all day
I've got to be sure I make it pay.
I've got to keep up with things
anew
And for that I mainly depend on
you.
Yes, 8000 Plus I refer to again
And I've nothing but praise for
your Editor's pen.

And for your editorial staff too of course – Please keep up the good work.

Janet M. Ridings,
Guildford.

Maybe the best thing to do is to train your dog to recite this while juggling floppy discs and send it in to That's Life.

Danish databases revisited

Having just read the letter from Henning Brondum-Nielsen in the August issue of 8000 Plus concerning his problem with foreign language sets in the excellent Masterfile 8000, the following should assist him.

As you so rightly say in your answer to his query, special characters have ASCII codes above 128, which means the printer treats these as an italic character. The answer lies on the CP/M Plus disc side 2; the file LANGUAGE.COM. This file allows you to change the character set to Danish by typing LANGUAGE 4. (A full list of the language variants and the characters available under CP/M are shown on pages 104 to 107 of the CP/M Plus manual).

If Mr Brondum-Nielsen uses this command immediately after booting CP/M he will then having the Danish Character set installed and can load Masterfile. The keys used for ø, æ etc are no longer [ALT]+8/9/0 but are shifted and unshifted square brackets. From within Masterfile he should select the printer options menu in format editing mode and set the character set to Danish; this will now display the correct character on screen and also now print it correctly. The same procedure will have to be adopted for any other language required.

I.A. Frediksen,
London SE21.

Thanks for the information. Incidentally, the key part is changing Masterfile's printer options. The LANGUAGE command in CP/M will change the characters that are displayed on the screen, but has no effect on the printout so this method won't necessarily work with all programs.

Top of the form

I don't know if I need a spreadsheet, a data base or a Leather Goddess from Phobia and I'd be most grateful if you could recommend something that would do the job. (I have an 8512, Locoscript 2 v2.03 with Mail).

I enclose photocopies of the manually produced documents involved and which I require to computerise for the twice yearly pay-out to rather less than 100 investors.

I need to be able to print out a sheet consisting of Folio Numbers, Shareholders' names,and their home address. Some have their bi-annual dividend warrants sent to their homes, but some investors have their dividends sent to other addresses, like their Banks. In one column we record the total number of shares held and, when the dividend per share is known, we multiply it by the total shareholding to discover the total dividend payable. This is subject to a Tax Credit (which the investor can reclaim in some instances) and this must be calculated and shown in another column, subtracted from the total dividend and the result shown. The final column is the warrant or cheque number of the payment and is not known until the warrants are produced.

The warrants take a form stipulated by Law and consist of two halves, the Tax Voucher and the 'cheque' which may be presented to his Bank. (See enclosed dummy example). To print these out a simple template would need to be produced (in word processing terms) to fit the pre-printed forms so that the appropriate variables print in the correct spaces. A major problem would seem to be the unfortunate necessity for printing out the amount payable in words as well as in numerals.

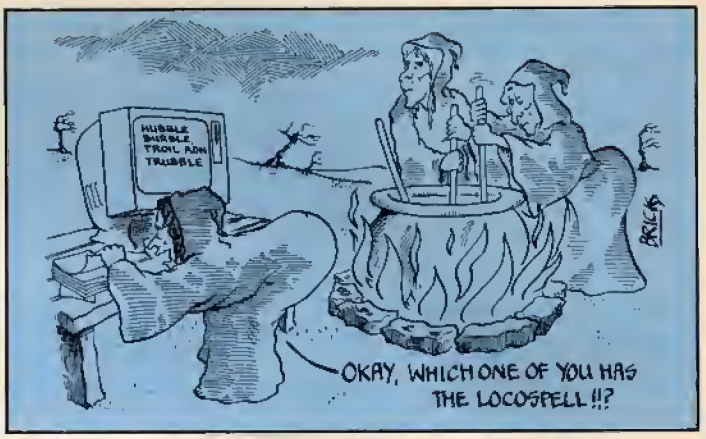
I would be most grateful for your comments, guidance or recommendations as, currently, I do not know which way to turn for skilled, experienced, erudite, impartial, accurate (grovel, grovel), advice.

Peter J. Townsend,
Townsend-Fanderville, West Kirby.

A spreadsheet like Supercalc 2 would be useful for the table you want to produce, although it is not usually possible to produce mailmerged documents from the data held in a spreadsheet. It sounds as though you should be able to get by with the software you have got, ie. LocoMail. Setting up the names, addresses and stockholdings in a mailing list is straightforward, and you can even get LocoMail to do all the sums for you if you just provide it with the dividend per share.

There are two problems: first, getting the text into the right place on the form, but a judicious use of tabs and margins should get you by. You might find a page layout template planner helpful, such as TempMate by Thurston Brown Associates (see advertisements passim).

Second problem is getting the words printed out to match the figures. It is probably possible to write a LocoMail program to do it for you, but (without knowing how strict the legal requirements on the form are) is it allowed to change the form slightly? Many computer-produced cheques nowadays have the words part split into columns – pence, units, tens, hundreds and so on – so £123.45 appears as 'One Two Three 45' in the right columns.



Grolsch misconduct

Here's how to make the little grey box print out, in reverse video, the disc management screen in LocoScript. You will need, apart from paper already loaded in the printer, a Philips head screwdriver, some kitchen towel, a tall glass and a bottle of Grolsch.

Pour the Grolsch, savour it, then place the glass immediately behind the top right hand corner of the keyboard where the flex emerges. Reach forward with your right hand to change the disc. On withdrawing it, your cuff engages with the glass and tips the Grolsch over the keyboard, drenching the numeric pad and other keys leftwards about as far as <.

Hey presto, the printer prints the screen in reverse video, ****ing the ribbon in the process. The screwdriver is for removing the six screws on the underside of the keyboard to retrieve the Grolsch.

The alternative is not to drink and drive.

C F Inman
London SW1

No speaka da lingo

I feel deprived, neglected, and underprivileged! Every month I read your excellent magazine in vain!

My problem is this. I need to make my maths programs run very much faster, because they contain a lot of iterative loops.

I cannot find a 'Mallard Basic' compiler, and I do not wish to get involved in programming in machine code. Should I upgrade to a 'hard disc' or 'maths co-processor'?

Should I be using COBOL, FORTH, FORTRAN, PASCAL, or ZBASIC? If so, why? One or two articles on this subject would be very helpful.

So, how about it Mr Editor? Not all of your readers are writing their first novel – some of us actually do sums!

How about a few TipOffs for those of us who use our computers for what they were really designed for in the first place!?

Dennis Carey,
Ulverston, Cumbria.

If you need to write fast programs, your best bet is to invest some time (and money) in learning a programming language other than BASIC. Pascal is a good bet, although you may find C helpful too. Hisoft supply a good range of languages. As for programming tips, you write 'em, we print 'em, so get to it!

Disc doctor

I am a doctor teaching anaesthesia and intensive care in Zambia on a British Aid project, and to help me in my job I have purchased and use 2 PCWs.

At times during the initial starting up the 8512 will not accept certain discs which have been copied from Amstrad original software. When this occurs it is often remedied by taking the disc out and replacing it more firmly, or by pressing the disc in during the loading procedure. Sometimes it will not load at all from certain discs, whilst accepting other ones without problem.

I believe that there must be a fault in drive A causing these problems. As you can imagine it is not practical for me to send the machine back to UK for repair, and I wondered if there is anything which you could suggest that I could do at this end to effect a repair.

You may be interested to know that the machine has enabled me to revolutionise the teaching programme for my anaesthetic students and record keeping on the ICU.

Dr. Iain Wilson,
Lusaka, Zambia.

If a disc drive is proving unreliable, the best thing to do is to replace the whole drive. You can buy by mail order A or B drives (have a scan of the adverts), and opening up the 8512 case to whip out the old one and slot in the new should be easy enough.

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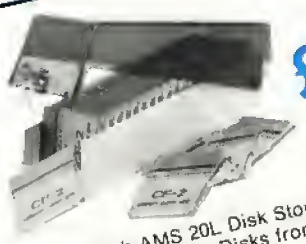

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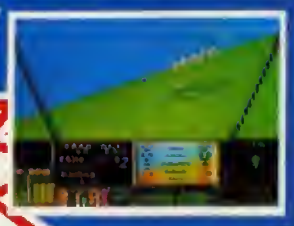

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